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ABSTRACT

This report describes Kentucky's Primary School Program, which was developed after the signing of the Kentucky Education Reform Act in 1990. An overview of the report explains the philosophy of the program and lists its critical attributes. These are: (1) developmentally appropriate practices; (2) multi-age classrooms; (3) continuous progress; (4) authentic assessment; (5) qualitative reporting methods; (6) professional teamwork; and (7) parent involvement. A section on program guidelines provides background information on the program, discusses the program's rationale and operational framework, and considers several policy issues. These include: (1) program implementation; (2) entry into the program; (3) school and class organization; (4) inclusion of special needs learners; (5) teacher collaboration; (6) funds for textbooks; (7) administrative regulations; (8) students' completion of the program; (9) teacher training; (10) teacher certification; (11) potential conflicts between teacher training programs; and (12) public awareness. A final section on technical assistance discusses program implementation; provides lists and charts of educational resources; and presents a testimonial to the primary school program. Appended materials include a glossary of terms, reprints of selected articles on primary education, and a copy of the primary school program logo. (BC)

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In all, over sixty professional educators in Kentucky have contributed time and expertise in this first year of "exploration" of Primary School. Commissioner Thomas Boysen and members of his staff are grateful to all, but in particular to the Primary School Staff Development Project Coordinators and Representatives and the Department Primary School Matrix Team members.

Kentucky Department of Education (KDE) Matrix Team

√ Linda F. Hargan, Chair
√ Joanne Brooks
√ Merry Denny
√ Ruth Fitzpatrick
√ Kay Freeland
Barbie Haynes
√ Steve Henderson
Susan Henson
√ Nancy Huffstutter
√ Joanne Jackson
√ Charlotte Kirk
√ Carole Kruse
√ Mike Miller
Elizabeth Nelli
√ Diane Teasley
√ Mary Wagoner
√ Kay Anne Wilborn

√ Also involved in Primary School Staff Development Project

Staff Development Project Coordinators/Representatives

Bardstown Ind.	Patrick Hagan
Butler County	Waymouth Martin
Erlanger-Elsmere Ind.	Oliver Bryant
Fayette County	Nawanna Fairchild
Franklin County	Carol Banks
Ft. Thomas Ind.	John O'Brien
Hancock County	Ann Evans
Jessamine County	Sue Megee Richard Williams
Laurel County	Pearl Jean Hughes
Jefferson County	Kathleen Nichter Carol McCollum
McCracken County	Larry Harper
Oldham County	Betty Edwards
Pikeville Ind.	Anne Keene
Powell County	Faye King
Pulaski County	Lois Hatfield Una Farmer
Rowan County	Gary Trent
Simpson County	Charles Campbell Penny Skillern
Univ. of Kentucky	Virginia Atwood
Univ. of Louisville	Ric Hovda

Additional KDE Personnel:

Betty Griffin
Beth Hargett
Joan Howard
Tony Koester
Shirley Mikel
Rita Osborne
Betty Polk
Judy Reed
Kate Shadoan

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Kentucky's Primary School
The Wonder Years

Program Description I

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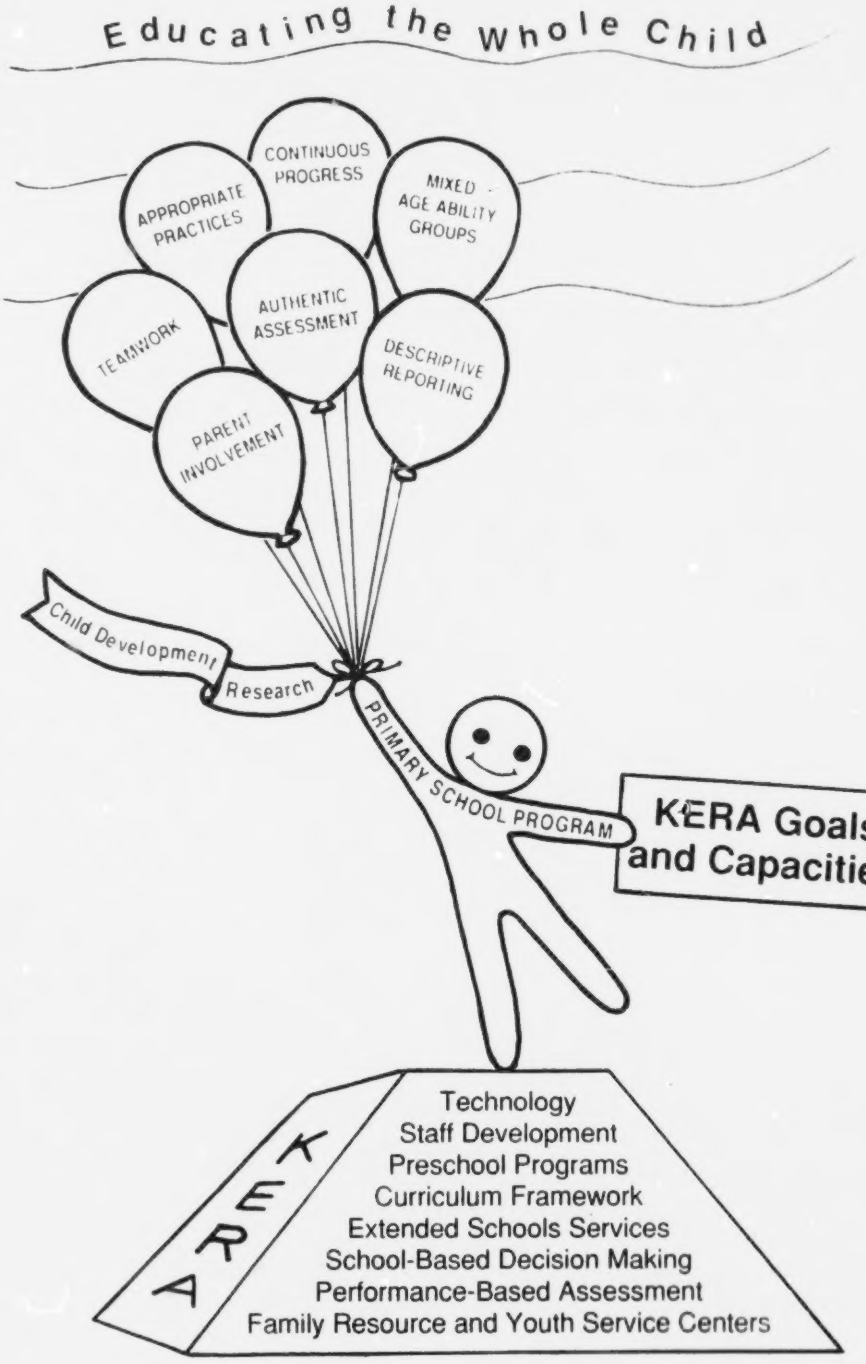
OVERVIEW

"The art of living is the most difficult task children have to learn, and they do this best if their parents or caretakers have a way of looking at life as a whole."

David Elkind, 1981

KENTUCKY'S NEW PRIMARY SCHOOLS


Educating the Whole Child
CONTINUOUS PROGRESS
APPROPRIATE PRACTICES
MIXED - AGE ABILITY GROUPS
AUTHENTIC ASSESSMENT
TEAMWORK
DESCRIPTIVE REPORTING
PARENT INVOLVEMENT
Child Development Research
PRIMARY SCHOOL PROGRAM
KERA Goals and Capacities
KERA
Technology
Staff Development
Preschool Programs
Curriculum Framework
Extended Schools Services
School-Based Decision Making
Performance-Based Assessment
Family Resource and Youth Service Centers

THE SIX GOALS OF LEARNING FOR STUDENTS IN THE COMMONWEALTH

1. Use of Basic Communication and Math Skills
2. Application of Core Concepts and Principles from Mathematics, the Sciences, the Arts, the Humanities, Social Studies, and Practical Living Studies
3. Becoming a Self-Sufficient Individual
4. Becoming a Responsible Member of a Family Work Group or Community
5. Thinking and Problem Solving
6. Connecting and Integrating New Experiences and Knowledge

PRINCIPLES OF LEARNING UNDER THE EDUCATION REFORM ACT OF 1990

1. A major focus on learning outcomes – not only academic skills
2. High expectations for all students
3. An emphasis on what is most important to learn
4. An emphasis on performance assessment
5. A variety of learning experience are encouraged
6. An emphasis on active learning using multiple senses
7. An emphasis on holistic learning
8. More emphasis on cooperative and group learning
9. Greater emphasis on quality learning experiences
10. Greater emphasis on using real-life experiences as content for learning

CHARACTERISTICS OF YOUNG LEARNERS

Young children are innately curious and will strive to learn.

Playful activity is a natural way of learning.

Young children learn by imitating, talking, and interacting with each other as well as with adults.

Concrete and multi-sensory materials are children's tools for learning.

Young children can simultaneously acquire knowledge and skills in many areas.

Learning occurs at different rates.

Learning impacts the "whole" child and vice versa.

Real-life experiences related to the interests of children promote learning.

Experiencing successes builds a sense of security and self-confidence.

PHILOSOPHY OF KENTUCKY'S PRIMARY SCHOOL PROGRAM

The Kentucky Primary School Program nurtures the continuing growth of children's knowledge and understanding of themselves and their world. This nurturing environment is characterized by developmentally appropriate practices, multi-age, multi-ability classrooms, continuous progress, authentic assessment, qualitative reporting methods, professional teamwork, and positive parent involvement. We believe a program demonstrating these characteristics provides a safe, caring, stimulating environment where the child grows and learning flourishes.

The Primary Program recognizes that children grow and develop as a whole, not one dimension at a time or at the same rate in each dimension. Therefore, the program reflects an understanding that children learn through active involvement using instructional practices that address the social, emotional, physical, aesthetic and cognitive needs of children.

The Primary Program provides a classroom climate which is non-competitive and encourages children to learn from one another as well as from their teachers. Diversity of skills and knowledge is accepted and accommodated by grouping and regrouping children for an effective instructional program.

The Primary Program flows naturally from the preschool program and exhibits developmentally appropriate practices. These practices allow for the broad range of children's needs, learning styles, knowledge, experiences, and interests. Children can experience success while progressing according to their unique learning needs. Continuous learning is enhanced through a coordinated and integrated curriculum incorporating a variety of instructional strategies and resources including play.

The Primary Program views authentic assessment and qualitative reporting methods as integral components of the teaching-learning process. This continuous assessment supports the child's learning and assists the teacher in making appropriate educational decisions.

The Primary Program values teachers and parents as partners in the child's education. Teachers regularly collaborate, plan, consult, and involve parents to create for the child a climate of respect, success, and joy necessary for lifelong learning.

> "In every task the most important thing is the beginning . . . . especially when you deal with anything young and tender."
>
> PLATO, THE REPUBLIC

PRIMARY SCHOOL POSITION STATEMENT

The primary school is that part of the elementary school program in which children are enrolled from the time they begin school until they are ready to enter the fourth grade (KRS 158.030(1),(2)). An appropriate primary program for all children recognizes that children grow and develop as a "whole," not one dimension at a time or at the same rate in each dimension. Therefore, instructional practices should address social, emotional, physical, aesthetic, as well as cognitive needs. The primary program flows naturally from preschool programs and exhibits developmentally appropriate educational practices. These practices allow children to experience success while progressing according to unique learning needs and also enable them to move toward attainment of the educational goals and capacities of the Kentucky Education Reform Act in an environment which fosters a love of learning. Developmentally appropriate educational practices, multi-age/multi-ability classrooms, continuous progress, authentic assessment, qualitative reporting methods, professional teamwork, and positive parent involvement are evident in the Primary School and are considered critical attributes of the program.

HOME
SCHOOL
COMMUNITY
PHYSICAL
COGNITIVE
SOCIAL
EMOTIONAL
AESTHETIC

CRITICAL ATTRIBUTES OF KENTUCKY'S PRIMARY SCHOOL PROGRAM

Kentucky's Primary School Program Position Statement identifies seven critical attributes as indicated in bold type below. The "bullets" under each are examples of the critical attribute, and represent strategies a school may choose, as well as others they may develop, as they write an Action Plan for Implementing the Primary Program.

Developmentally Appropriate Educational Practices

- Integrated curriculum
- Active child involvement, interaction, and exploration
- Use of manipulatives/multi-sensory activities
- Balance of teacher-directed and child-initiated activities
- Varied instructional strategies and approaches such as whole language, cooperative learning, peer coaching/tutoring, thematic instruction, projects, learning centers, and independent learning activities, etc.
- Flexible groupings and regroupings for instruction based on interest, learning style, problem solving, skill instruction (short term), reinforcement, random, etc.

Multi-Age/Multi-Ability Classrooms

- Heterogeneous grouping
- Flexible age ranges
- Family groupings

Continuous Progress

- Students progress at own rate as determined by authentic assessment
- Promotes social, emotional, physical, aesthetic, cognitive development
- Success oriented
- Non-competitive
- Documentation of pupil progress through anecdotal records, observations, portfolios, journals, videotapes, computer disks, etc.
- Non-retention/Non-promotion

Authentic Assessment

- Occurs continually in context of classroom involvement
- Reflects actual learning experiences
- Emphasizes conferencing, observing, examining multiple and varied work samples, etc.
- Documents social, emotional, physical, aesthetic, and cognitive development

Qualitative Reporting Methods

- Descriptive, narrative, ongoing
- Reflect a continuum of pupil progress
- Varied formats such as portfolios, journals, videotapes, narratives, etc.

Professional Teamwork

- Securing regular time for planning/sharing
- Varied instructional delivery systems such as team teaching, collaborative teaching, peer coaching, etc.
- Regular communication among all professional staff (PE, Music, Art, Special Education, Gifted, Chapter 1, etc.)

Positive Parent Involvement

- Home/school partnerships
- School/Community partnerships
- Continuous information exchange

A NEW PARADIGM FOR PRIMARY SCHOOL

This is a table for viewing the Paradigm shift as a continuum of change. The KERA goals and capacities along with the Critical Attributes of the Primary Program are driving forces that are changing the Paradigm. Most schools are between the ends of the spectrum rather than at either pole.

FROM TRADITIONAL SCHOOL CONCEPTS (K,1,2,3) → → → →	KERA GOALS/CAPACITIES PRIMARY PROGRAM CRITICAL ATTRIBUTES → → →	TO PRIMARY SCHOOL CONCEPTS
	PHILOSOPHY	
Uniformity is valued.		Diversity is valued
Group norm - "child must fit the school"		Individual norm - "school must fit the child"
Extrinsic motivation		Intrinsic motivation
Emphasis on cognitive development.		Emphasis on "whole child" - social, emotional, physical, aesthetic, and cognitive
Child as dependent		Child as partner in learning
	ORGANIZATION	
Graded		Ungraded
Age-level, ability-grouped		Multi-age, multi-ability
Grouping is static		Flexible grouping and regrouping
Child assigned individually to teacher for one year.		Family grouping - groups of children remain together with same teacher(s) for more than one year
Segregates (special programs/population)		Integrates (inclusionary, mainstreams)
	CURRICULUM	
Graded		Ungraded
Separate subjects		Integrated or correlated subjects
Prescribed sequence (lock-step)		Developmental sequence (variable)
Established (preset material is covered)		School/teacher determined (children's capacity to learn is extended)
Focus on 3 R's		Focus on concepts, skills, processes, and attitudes
Limited multi-cultural content.		Content expanded, multi-cultural content
Work and play divided		Play is a type of work for young learners
Fixed daily schedule		Flexible time
	INSTRUCTION	
Sequential skill development		Solving real-life problems learning skills as needed
Rote learning		Conceptual learning
Verbal informational emphasis		Constructivist, problem-solving, thinking emphasis
Grouping by skill ability		Grouping by interest, learning style, and learning needs
Child is recipient of the teacher's training		Children are collaborators in own learning and learn from each other as well as from the teacher
Child as passive learner		Child as active learner
Workbooks		Concrete materials, quality literature, and a variety of resource materials

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FROM TRADITIONAL SCHOOL CONCEPTS (K,1,2,3) → → → →	KERA GOALS/CAPACITIES PRIMARY PROGRAM CRITICAL ATTRIBUTES → → →	TO PRIMARY SCHOOL CONCEPTS
	INSTRUCTION (cont'd)	
Whole group instruction		Whole group, small group, and individual instruction
Individual tasks		Balance of small group, cooperative, and individual tasks
Teacher directed		Balance of child initiated and teacher directed
Answers are valued		Questions are valued
	ASSESSMENT	
Grade level expectations		Continuous progress toward KERA valued outcome
Focuses on what a child already knows		Focuses on how a child learns and what a child "can do"
Paper and pencil representations		Multiple ways of representing knowledge
Single correct answer		Alternative solutions
Discreet "events" for classification and reporting.		Ongoing for instructional decision-making and reporting
Reporting is competitive/comparative (A-B-C-D-F).		Reporting is individualized and narrative
Teacher as sole arbitrator of what is correct.		Children as theory builders and negotiators
	LEARNING ENVIRONMENT	
High expectations for performance of SOME students		High expectations for performance of ALL students
Competitive (some win, some lose).		Cooperative
Failure/retention accepted for some.		Success expected for all
Limited opportunity for social interaction		Extensive opportunities for social interaction
Rigid physical environment.		Tables, learning centers, natural settings, varied materials, activity areas
Silence, limited movement and interaction.		Purposeful movement and interaction encouraged
Pupil perceptions of self and others tied to academic success.		Successes in other areas of development are recognized and valued
Structure limits adult collegiality and collaboration		Structure encourages adult collegiality and collaboration
Parental contact revolves primarily around grades and promotion/retention issues.		Parental contact is progress-focused/parents are more involved in the learning process
Timed expectations for learning/performance.		Child paced, time permitted

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Note: This table was adapted and expanded from similar analyses of contrastive features from the following sources:
The Primary Program: A Continuum of Change, Primary Program Resource Document, Ministry of Education, British Columbia. 1990
Contrastive Features: Graded vs. Ungraded, Professional Presentation, Dr. Ric A. Hovda, University of Louisville. 1990
Presumable Contrasts: Conventional System vs. Nongraded System, Professional Presentation, Dr. Robert H. Anderson. 1991
Characteristics of Exemplary Programs: Academic Education Model vs. Developmental Educational Model, Early Childhood Conference Handout, Ohio Dept. of Education. 1991
Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth Through Age 8, National Association for the Education of Young Children. 1990

POLICY ISSUES

Twelve policy concerns are addressed as resolutions to KEY ISSUES. These are fully explained in the Guidelines Section of the Program Description. Briefly they are as follows:

1. Implementation - begins in 1992-93. All schools are not at the same level or readiness for the changes in Primary School. An action plan will allow a 2-3 year process for implementation.

2. Entering Primary School - Kindergarten is part of primary school. KRS 157.320.(7) states "...Kindergarten is the entry level of the primary program".

3. School and Class Organization - local district and school level decision. Options are presented. Organizational structures which currently house Pre-school-K, K-1, and K-2 may be used effectively as part of the Primary School Program. Suggestions are offered for assigning children to class groups.

4. Inclusion of Special Needs Learners - The primary program can and is encouraged to accommodate a wide range learner needs. This does not preclude the appropriate use of resource rooms, self-contained classes, or special settings.

5. Planning Time for Teachers - Professional Teamwork is a critical attribute of the Primary Program, and time for teachers to plan collaboratively for the instructional program on an ongoing and regular basis will be essential to the success of the program. Statutory direction and suggested strategies are offered.

6. Textbook Funds - There is flexibility in use of state textbook funds to purchase developmentally appropriate materials, such as manipulatives, in primary schools. Purchase guidelines are specified.

7. Regulations Development - Regulations will be flexible and more in the form of "guidelines" than prescriptions. It is anticipated that regulations will be developed in the Summer of 1991 and will require the development of an Action Plan for Implementation.

8. Completing the Primary School - The regulation specifying criteria for successful completion of the Primary School cannot be developed until the Council on School Performance Standards has completed its work. The criteria will consider the social, emotional and physical readiness for fourth grade as well as academic considerations. Local policy will determine if a child must spend at least 4 years in primary school.

9. Teacher Training - The Department is meeting with colleges and universities to address the preservice training needs for primary teachers. Extensive staff development opportunities for inservice will be observed by the Department, and draft plans for twenty-seven offerings are included in the Program Description.

10. Teacher Certification - For the 1991-92 school years, districts may assign a 1-8 teacher to a primary classroom containing first year students (K), or a Kindergarten certified teacher to a primary classroom containing pupils in the age range of first, second, and/or third grade by following the provisions of the interim Primary Policy as specified in the Program Description.

11. Kentucky Internship Training Program - The Classroom Observation Instrument (COI) used in evaluating teacher interns is not inconsistent with the Developmental Model. However, the training of observers using the form will need to be modified to assist them in using the COI effectively in working with interns using developmentally appropriate practices in primary classrooms.

12. Public Awareness/Parent Information - Primary School will be a major focus of a KERA Public Awareness program being sponsored by the Business Roundtable. Staff from the Department, with assistance from the Kentucky School Public Relations Association will develop a packet of materials, ideas, sample press releases, etc., to be customized for local use and disseminated to districts during the summer of 1991.

OPERATIONAL FRAMEWORK

The operational framework for Primary School consists of the following stages:

EXPLORATION

(Awareness) Understanding the Change

Reading, attending conferences, visiting resource schools, sharing and discussing with others – finding out about Primary School

ORIENTATION

(Preparation) Getting Ready for the Change

Applying information gained from the Exploration stage to district, school, and individual considerations of Philosophy, Curriculum and Instruction, Organization, Assessment, and the Learning Environment for Primary School. During Orientation, studies of the district curriculum should be made in order to align it with the Curriculum Framework and the Valued Outcomes at the fourth grade level. Assessment strategies and the Continuous Assessment Program should be re-examined as well. District decision-makers and School Councils (where they are in place) should be involved in these processes.

During the Spring of 1992 each school must develop an Action Plan to implement a Primary School Program in accordance with their decisions in each of these areas. The Action Plan may cover a period of several years, with completion by the beginning of the '95-'96 school year.

IMPLEMENTATION

(Action) Putting Change into Practice

Implementation is a process, not an event. Each school begins implementation of their Action Plan no later than the 1992-93 school year. Schools may move through several "phases" on the Continuum of Change from Traditional School to Primary School over a several year period. The format for and examples of Action Plans are under development. However, three Samples of Phases in Implementing Primary School, Plan A, Plan B and Plan C, follow. Some schools are already moving into or may wish to move into the Implementation Stage earlier than 1992-93. The following sample phases for implementation may occur anytime during the Implementation stage and are not necessarily tied to the school year designations.

NOTE: In the Program Description Document, Key Issue #1 IMPLEMENTATION, provides more explicit information about levels of implementation, and Helping It Happen: Tips on Getting Started in the Technical Assistance section will help guide the activities and decisions in each stage of the Operational Framework.

SAMPLE PHASES IN IMPLEMENTING PRIMARY SCHOOL

Below are three examples of hypothetical plans (A, B & C) from the beginning of the implementation stage through several years. Each program is different in its own way within the framework of the primary program. Each program is addressing the critical attributes but different strategies and procedures are being used to implement an exemplary primary school program by 1995-96. There will be many other variations of many different approaches within the framework of the primary school. There may even be different techniques happening within the same building. Strategies identified may become a part of a school Action Plan.

PLAN A

	Orientation	Implementation		
		92-93	93-94	94-95
Curriculum	All subjects are taught separately	Several interest centers are designed to extend and enhance the daily curriculum/ Center time occurs for a block of time in the afternoon after most content/ skills have been introducted/ Centers change throughout the year, activities in each center changes weekly	Centers expanded to include all content areas and are kept throughout the year/ Extra centers are incorporated and changed throughout the year/ Activities change weekly, support the curriculum, and are open-ended to allow for varying ability levels/ Center time block is increased	Open centers: students move between centers and small group instruction/ Centers expanded to include all the arts/ Children involved in planning designing and evaluating activities/ Students make most of their own choices/ Activities are performance based
Organization	One teacher teaches the classroom	One teacher teaches in the classroom and guides center flow and activities	Two teachers combine classes (of two different years in school)/ About 1/2 of children stay with their last year teacher Activities and subject matter are presented to entire group/ Small groups are used for skill building/ Teachers team teach, plan and support each other through the day	Family grouping continues/ Older students work with new students to understand the routines and expectations The two teachers work as one
Instruction	Textbooks are used for each subject with field trips, experiments and specific activities added to the science and social studies curriculum/ Some math manipulatives and real items are used for math	Basal readers used for core of instruction/ Good literature and print rich environment abound Special area teachers and aides assist in management and flow of center traffic	All textbooks used as reference and supplemental materials Students assigned to cooperative learning groups quarterly	Cooperative learning groups are a vital part of the integrated day Extensive resources available for students' use (globes, maps, reference books, a wide variety of real items, etc.)

PLAN A

	Orientation	Implementation		
		92-93	93-94	94-95
Learning Environment/ Collaboration	Children with special needs (special education classes, speech, Chapter I tutoring, gifted education, etc.) are pulled out of classroom during the day	Some collaboration with tutoring and speech/ Other programs still pull-out but teachers planning together more Librarian helps to secure a variety of quality literature for classroom use and helps regularly with reading center	Collaborative model started with other special needs students Special area teachers help with ideas for centers Portable computer lab available for all students	Speech and Chapter I teachers continue, modify and perfect collaborative model to meet needs of students and styles of teachers/ Collaborative model used but some pull-out programs are still needed for some children/ Special area teachers, including the librarian and computer teacher, work with the classroom/ Also involved in setting up and maintaining particular centers and related activities and instruction
Learning Environment	Every student has his/her own desk and is expected to work on his/her assignments	Materials are available and accessible to students/ Children are allowed to move, choose centers and to talk with peers Centers are arranged around the room in many different ways/ Work areas vary with particular centers/ Tables are used for large and small teacher - directed instruction	More tables and comfortable areas for learning are set-up throughout room Students actively involved in their own learning	Classroom environment changes to accommodate centers and activities available Children are responsible for their own learning
Assessment	Letter grades are given and reports cards sent home quarterly Children are retained when not meeting defined expectations	Starts keeping portfolios and other samples of work performance (authentic assessment) Work performances broken down into skills that generate fourth grade outcomes/ skills listed as a continuum/ Uses report card but changes evaluation to read: steady progress, improving and needs more time No retention Family grouping-will keep about 1/2 of students next year	Moves to progress report with narrative descriptions of progress Continues with portfolios Begins with anecdotal record keeping No retention/no promotion Family grouping continues Skills continuum generated for each center and correlated with authentic assessment	Authentic assessment and qualitative recording methods driven by developmental appropriate curriculum Children initiate audio and video taping of performances and projects Family grouping continues
Learning Environment/ Parent Involvement	Parents asked to participate on field trips and party days/ Parents requested to attend conferences when problems arise	Parents asked to help in the classroom on a regular basis Parent/teacher/student conferences established for all students/ Emphasis is placed on what a child does well	Parents form a special council to help with school-based management for next year Parents actively involved/ Three parent/ teacher/student conferences held yearly	Parents are active members of school based management council Parents work with local businesses to secure more computers Narratives sent home regularly Conferences held every quarter

PLAN B

	Orientation	Implementation		
		92-93	93-94	94-95
Curriculum	Content areas taught traditionally Language arts supplemented with daily journal writing and literature based reading Math manipulatives are added to the math curriculum ACES (Activity Centered Elementary Science) is being adopted Three computers added to classroom Writing and editing emphasized	Children from two grades work together Whole language approach being started/ journaling, process writing, independent reading, etc./ Language is integrated to include parts of all content areas/ Mini-skill groups used when needed Specific programs are used when they fit into the curriculum (they are not forced, nor do they drive the curriculum) Math taught without the use of workbooks by using manipulatives and "Math Their Way" approach Social studies, science and math ability grouped for skill study Programming is emphasized in technology One more new computer added Charts developed to assist teachers in adequately addressing fourth grade outcomes	Integrated curriculum Broad based themes are used (and changed four times per year)/ Topical themes are used that support the broad based theme and are changed when the children are ready to tackle a new topic/ These themes generate the "connectors" that integrate the curriculum and make it real to the students Reading and writing are demonstrated daily Curriculum is performance based Children are involved in planning and evaluating the themes, the class's progress and their own progress/ Group meetings are held daily Librarian and special area teachers are invited into the classroom to help with group planning/ All areas are incorporated into the themes/ Literature, art, music and PE are included throughout the day/ Most technology is taught in class, not the lab/ More computers are added to classroom setting Skills continuum organized to assure fourth grade outcomes are addressed	Developmentally Appropriate Curriculum in place Continuously fine-tunes curriculum and desired knowledge base for attainment of performance outcomes
Organization	Multi-age groupings of two or more age spans, forming several classes in a "pod" 5 year olds (first year students) come in for buddy reading Some ability grouping for content area Students move from teacher to teacher and are regrouped throughout the day/ Children involved with all teachers and have contact with every student in the pod (through the regrouping) for a "family" feeling PE, music, art, creative writing and field trips are multi-ability grouped	Family grouping is used/ Children stay in same homeroom/ New students enter into the class when openings are left by outgoing students/ Students heterogeneously grouped for entire language arts block/ First year students involved with buddy reading and special projects	Family grouping is ongoing/ Children are in charge of helping new students feel comfortable in this situation The entire pod is heterogeneously grouped (except for special skill groups on an ad hoc basis) First year students are in class half their school day	Grouping and regrouping adjusted throughout the year to meet children's needs First year students involved for most of the day Family grouping continues

PLAN B

	Orientation	Implementation		
		92-93	93-94	94-95
Instruction/ Teamwork	Teachers specialize in specific content areas but plan the curriculum together Pod teachers have approximately 1/2 hour planning time together daily Teachers read and attend workshops on whole language/ All staff development is geared towards this area	Teachers plan together and start facilitating learning rather than teaching Teachers feel like real "team" and work together for the "whole" program Staff development emphasis is on theme development and integrated curriculum Daily team planning time is essential	Teachers facilitate the day and they observe and conference regularly with students They ask questions for high level thinking skills to be developed Staff development emphasis is on Gardiner's seven intelligences and how to incorporate them into next year's curriculum Teachers are excited about learning and plan to develop new strategies every year	Teachers start charting activities and strategies that address each of the seven intelligences Emphasis is on providing equal opportunities for all intelligences. Creative ideas are being pursued to ensure planning time with all teachers (including special area and needs teachers)
Learning Environment/ Collaboration	Collaborative model for all special needs population put into effect/ Extra planning and adaptation to meet all children's needs are necessary	Special needs teachers and pod teachers plan and work together/ Careful observation of students is performed by all "pod " staff	Collaborative model working smoothly Teachers, aides, and students work well smoothly	Special needs children are developing high self-esteem
Learning Environment	Children sitting at desks/ Desks grouped when appropriate/ Tables provided for group times Reading corner designated	Tables bought and bean bag chairs donated Carpet squares laid down in corners Some desks still available Space provided for each child's belongings Children move around as they learn	Children may work where they feel most comfortable/ Classroom arrangement changes daily Free selection of materials and work stations available to all students A continuous low hum fills the room Children stay actively involved and busy Cooperative learning groups used for certain activities Shelves and supplies at children's level	Students take responsibility for their classroom Classroom environment guided by curriculum and instruction

PLAN B

	Orientation	Implementation		
		92-93	93-94	94-95
Assessment	Each child has his/her own daily plan, developed by the pod teachers/ Each child has his/her own porfolio/ Teachers carry clip boards and jot down notes as needed (anecdotal records) Report cards are changed to progress reports	Teachers and students write daily plans together during their bi-weekly conferences They plan (at the beginning of the week) and review (at the end of the week)/ Students file their own papers in their portolios/ Evaluation is authentic and performance based Daily plans, anecdotal records, and portfolios are used in parent conferences (The progress report is no longer used)	Students write their own plans Students consult and conference with teachers regularly	Children are given responsibility for their own learning and for evaluating themselves/ Conferencing occurs regularly with peers and teachers Performance "matches" outcomes
Learning Environment/ Parent Involvement	The school chooses to implement school based decision making/ Parent Council is formed Parents welcome in the classroom/ Parents invited to particpate in any way they can Parents asked to conference twice a year	Parents ionvolved in reading and writing with children during class time Parents help to raise money for multiple sets of good literature books and new computers Parents asked to conference three times per year/Weekly narratives go home	Parents working to buy more math manipulatives and computers for classroom Students included in parent/teacher conferences	Parents actively involved in classrooms and as support personnel Parents initiate community based involvement with area businesses/ Grants are written for more comfortable furnishings and to expand the multiple intelligences research to be used in the following years

PLAN C

	Orientation	Implementation		
		92-93	93-94	94-95
Curriculum	Units/themes for science and social studies Manipulative math Faculty starts developing their own curriculum framework including desired outcomes, goals and standards for student performance	Continues integrated social studies, science and math/ Supplements the basal reader with literature based instruction (throughout year moves away from basal teaching) School's outcomes are incorporated in KERA's outcomes Framework is integrated with curriculum and instruction strategies	Theme based instruction expands to incorporate literature based reading and other content areas Curriculum and instructional strategies are driven by the performance outcomes	Theme-based integrated curriculum in all content areas (including whole language) Student's knowledge and performance directly linked with expected fourth grade outcomes
Organization	Self-contained classroom	Mixes two age groups for social studies and science (about 1 1/2 hours per day) multi-age/multi-ability Starts Cooperative Learning	Starts family groupings (keeps most students from last year)/ adds in new second year students to have at least two age groups in team Multi-ability grouping continues in social studies and science and now in reading and language Cooperative Learning Groups used regularly	Multi-age/multi-ability all day Includes first year students for about an hour per day - each student becomes a member of a cooperative learning group
Instruction/ Teamwork	Shares ideas and materials mainly with one other teacher/ Collaborates on themes with the one teacher/ Makes time to work together Works closely with librarian to get books and materials relative to the science and social studies themes/units Asks for input with special area teachers related to themes/units	Team planning of themes being taught in social studies and science - 2 age groups (multi-ability) Secures planning time once a week Librarians, along with special area and special needs teachers, start incorporating the themes into their own instructional time/ These teachers are asked to be involved in planning when possible	Total team teaching with one other teacher in two adjacent rooms/ door open all the time/ teachers and students move from room to room depending on activities Secures daily planning time Special area teachers take multi-age groups Librarian moves toward "open library time" with classrooms having special skill classes on an ad hoc basis	Adds a third teacher to their team and works together closely with kindergarten teacher Daily planning continues Collaborative model used for special area teachers Art, Music, and PE valued and incorporated throughout the day

PLAN C

	Orientation	Implementation		
		92-93	93-94	94-95
Learning Environment/ Collaboration	Collaborative model to address special needs children being discussed	Speech teacher comes into classroom to work with speech and language needs - she also works with the entire class or small groups (including non-speech children)	No pull-out programs of special needs learners (except for two specific children who need this) Special education teachers are involved in planning	Students feel special needs teachers are part of the family/ Children needing special help are not identified in the classroom setting Collaborative model running effectively
Learning Environment	Groups and regroups desks as needed/ Some tables available for project work Work displayed Hands-on materials are ordered	Library corner with comfortable places for reading is added More tables are added Shelves are added with materials at children's reach More manipulatives are ordered	All tables/ no desks Individual cubbies are provided for all students Continuous ordering of manipulatives and other appropriate materials	Students structure their own environment depending on type of work being done Continuous ordering of desired materials to meet children's needs
Assessment	No real change in assessment but more authentic assessment in social studies and science due to how content is taught/ Most assignments involve projects Starts keeping portfolios Does not retain any students Faculty starts addressing criteria for completing primary school	Changes report card to a check list (progress linked with criteria for moving into the fourth grade)/ Asks for 2 parent conferences during the year/ Starts videotaping projects and audio taping readings/ Works on keeping more accurate information in portfolios/ Child helps and is aware of what is in his or her portfolio/ Refers to students by years in school-not grades/ Teachers find ways for every child to succeed	Starts keeping anecdotal records Curriculum now structured to allow students to move at their own pace and compete against themselves, not others Increases parent conference to three per year Documents what a child knows and does well, not what he doesn't know and does poorly	Students write in journals every day Fine-tunes all reporting methods/ Involves students and parents in conferencing and evaluation/ Students are aware of and can demonstrate criteria for exiting primary school Starts keeping computerized anecdotal records by using a scanner
Learning Environment/ Parent Involvement	Parents are invited to special meetings	Parents are asked to help with activities, particularly involving the themes Parents are involved with video and audio taping of students Parents are asked to attend two conferences per year	Parents are asked to attend three conferences per year Parents are encouraged to participate in daily school activities and made to feel comfortable in a non-threatening environment	Parents are appointed to a school council Parents are asked to contribute one entry or summary of their child's progress behavior at home for the portfolio disk

GUIDELINES

> *"The relation of thought to word is not a thing but a process."*
>
> L. S. Vygotsky
> Thought and Language
> 1962

BACKGROUND

In April of 1990, the Kentucky Education Reform Act was signed into law. With its passage came substantial changes affecting all areas and levels of schooling, including curriculum, assessment, governance, finance, and accountability for high performance of all students. Specific focus was placed on early childhood programs, with the provision of preschool programs for economically disadvantaged children and those with disabilities, and the development of a "Primary School Program" as that part of the elementary school in which children are enrolled from the time they begin school until they are ready to enter the fourth grade.

What is a "Primary School Program"? Why was this program level singled out for attention? What's wrong with what we're doing now in Kindergarten through third grade? In one part of the law which addresses needed changes in courses of study, it refers to an "ungraded" primary. What does "ungraded" mean? Professional development is required in the area of nongraded primary programs. Do "nongraded" and "ungraded" mean the same?

To answer these and other questions, a systematic process was established to:

- examine all statutory provisions regarding Primary School
- review the provisions of KERA which impact Primary School
- review the Curriculum Committee Recommendations
- review direction and clarification provided by David Hornbeck (consultant to the Curriculum Committee), by other Task Force members, and by LRC staff
- review the recent literature and research concerning early elementary education and "nongradedness"
- review position statements of National Organizations concerned with the education of young children
- attend conferences and hear national consultants
- visit or talk to schools identifying themselves as "primary programs", "ungraded" or "nongraded"

WHAT DO THE STATUTES SAY?

KRS 158.030(2) provides a definition.

""Primary School Program" is that part of the elementary school program in which children are enrolled from the time they begin school until they are ready to enter fourth grade. Notwithstanding any statute to the contrary, successful completion of the primary school program shall be a prerequisite for a child's entrance into fourth grade. The State Board of Elementary and Secondary Education shall establish, by regulation, methods of verifying successful completion of the primary school program pursuant to the goals of education as described in KRS 185.6451."

KRS 158.030(1) explains who may attend.

"..Any child who is five (5) years of age by October 1, may enter a primary school program as defined in subsection (2) of this section."

KRS 157.320(7) clarifies the Kindergarten issue.

"..Kindergarten is the entry level of the primary program."

KRS 158.060(1) addresses the length of the school day.

"...Except for handicapped children and children attending the primary school program who may attend a program of less than six (6) hours per day under policy adopted by the local school district board of education and approved by the State Board of Elementary and Secondary Education, a minimum of six (6) hours of actual school work shall constitute a school day. Kindergarten programs may be operated for less than six (6) hours without state board approval."

KRS 156.060(1) requires development of regulations.

"...Administrative regulations shall be adopted for the following: (a) Courses of study for different grades and kinds of common schools, including procedures for developing an ungraded primary program which shall be implemented by the beginning of the 1992-93 school year."

KRS 156.095(4)(d) requires staff development.

"...Professional development shall focus on the following areas during the 1990-91 and 1991-92 school years: ...(d) Nongraded primary programs; ..."

Reviewing the statutes obviously leaves many questions still unanswered.

WHAT PROVISIONS OF KERA IMPACT PRIMARY SCHOOL?

It is necessary to review some of the KERA provisions as a backdrop as we develop a conceptualization of Primary School.

The Act specifies CAPACITIES to be acquired by all students, and for schools. In these statements the outcomes for students are defined in far broader terms than just academics, or content acquisition, and include outcomes such as "become a self-sufficient individual", "think and solve problems", and "integrate experience and new knowledge". Schools are charged with goals such as "reducing physical and mental health barriers to learning" as well as more typical goals such as reducing dropout and retention rates (KRS 158.645, KRS 158.6451).

These outcome statements apply to students in the Primary School Program as well as to those in the other grade levels. Of particular importance are goals (a), (b), and (e).

(a) Schools shall expect a high level of achievement of all students.

(b) Schools shall develop their students' ability to:

1. Use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives;
2. Apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, and practical living studies to situations they will encounter throughout their lives;
3. Become a self-sufficient individual;
4. Become responsible members of a family, work group, or community, including demonstrating effectiveness in community service;
5. Think and solve problems in school situations and in a variety of situations they will encounter in life, and
6. Connect and integrate experiences and new knowledge from all subject matter fields with what they have previously learned and build on past learning experiences to acquire new information through various media sources.

(e) Schools shall reduce physical and mental health barriers to learning.

Performance-based assessment will replace norm-referenced testing to help us determine what students know and can do. These assessments will be developed to gauge how well students are meeting the expected outcomes necessary to achieve the goals and capacities (KRS 158.6453). The continuous assessment process for primary students will determine where each child is in relation to the fourth grade outcomes rather than how the child is doing compared to others who have been in school the same number of years or are the same age.

Site-based decision making acknowledges school as a place where adults work as well as a place where children learn, and empowers school councils to make critical instructional decisions. School councils, consisting of parents, teachers, and the principal, will decide curriculum, materials, support staff, assignment of staff time, student grouping and scheduling, use of school space, and other issues regarding instructional practices. The inclusion of parents emphasizes the critical role of parents as partners in the educational process. (KRS 160.345) With the empowerment at the school level also comes accountability in the form of rewards and sanctions based on student outcomes (KRS 158.6455). School councils will play a critical role in the development and implementation of primary programs in each school.

Staff development is funded extensively to address the training for teachers necessary to support the KERA changes (KRS 156.095). Nongraded Primary Programs are an area mandated for professional development in 1990-91 and 1991-92.

Preschool programs are provided for those students placed at risk for school failure due to economic deprivation or handicaps (KRS 157.226, KRS 157.3175). Giving these children early intervention will contribute to a successful 4-year Primary School experience.

Family Resource and Youth Service Centers are funded to provide support in health issues, family issues and social issues (KRS 156.497).

Extension funds are provided for Technology, for instruction and management in the classroom, and for administrative applications. Technology will greatly assist the Primary Teacher in individualizing instruction and in managing the instructional process.

Extended school services are provided for approximately one-third of the student population who may need additional "time" in the form of extended day, extended week or extended year programs in order to successfully achieve the outcomes (KRS 158.070(7)). This service will permit many students to complete Primary School in four years.

SEEK funding mechanisms permit extensive flexibility in use of state dollars (KRS 157.330-360). With the abolishment of the "unit" funding of the Minimum Foundation Program, and the designation of special education "units", teachers employed as special educators may also work with non-handicapped students. This provides more flexibility in the use of special teachers to assist with the learning program in the regular class environment and supports collaborative and team teaching models.

Given the changes that will occur in all schools, the changes in Primary School are beginning to emerge.

RECOMMENDATIONS FROM THE CURRICULUM COMMITTEE REPORT

In addition to provisions in the Act itself, the Curriculum Committee Report provides some insight as to why the K-3 block was targeted to become Primary School.

In the Recommendations Related to Curriculum adopted by the Task Force on Education Reform on 2/23/90, the statement is made:

> "...I recommend that we abolish grade differentials up until entry into the fourth grade. That will eliminate the possibility of "failing" kindergarten or the first grade. The basic school will, thus, extend from age 4 through roughly age 9, with the objective being to having all youngsters ready to enter the 4th grade by (age) 8-10 with parents as part of the successful partnership." (p. 65)

Evidently non-retention, continuous progress and parent involvement are involved in the concept of a primary school program.

David Hornbeck, major advisor to the Curriculum Committee of the Task Force on Educational Reform presented the following principles to the Prichard Committee in April of 1990 relative to how Kentucky will change the culture of schooling. Primary school is part of "schooling" in Kentucky, therefore, these principles apply to our conceptualization of Primary School.

Principles of Learning under the Education Reform Act of 1990

1. *A major focus on learning outcomes - not only academic skills*
2. *High expectations for all students*
3. *An emphasis on what is most important to learn*
4. *An emphasis on performance assessment*
5. *A variety of learning experiences are encouraged*
6. *An emphasis on active learning using multiple senses*
7. *An emphasis on holistic learning*
8. *More emphasis on cooperative and group learning*
9. *Greater emphasis on quality learning experiences*
10. *Greater emphasis on using real-life experiences as content for learning*

On March 22, 1991, David Hornbeck addressed the new State Board for Elementary and Secondary Education. In his comments he indicated that primary school was intended to acknowledge that children learn at different rates and in different ways, (which is particularly critical at young ages when the difference between a four-year old and a five-year old constitutes one-fifth of that child's entire experiences), and that developmentally appropriate practices which take that into consideration should ensure that no child "fails" prior to fourth grade.

He mentioned the task force was concerned by the high retention rates in early grades in Kentucky because of the damaging effects on children's self-esteem, and also because of the high correlation of early retention and later dropout. When asked by a Board member why it would be any different for a child to be in Primary school more than four years, or to "fail" at fourth or fifth grade level, Dr. Hornbeck responded that an older child, with a good three or four years of "success" behind them, who feels good about school and about themselves, can handle such an experience better.

Note: Nationally retention rates for K-3 range between 20% and 30%. Kentucky falls within that range. In the class that entered Kindergarten in 1986, nearly 22% had failed by the end of third grade.

RETENTION RATES IN KENTUCKY'S PUBLIC SCHOOLS

	1989-90	1988-89	1987-88	1986-87	1985-86
KINDERGARTEN	3.73	4.48	4.71	4.42	4.03
GRADE 1	4.06	10.93	11.47	11.50	5.38
GRADE 2	3.17	3.85	4.36	4.83	4.90
GRADE 3	1.91	2.49	2.97	3.22	3.00

At this point, Dr. Hornbeck stressed the needed curriculum changes to ensure: social-emotional development, skills and opportunities needed by children to learn to work successfully in groups, and vastly different approaches to assessment not only in the way we test (from standardized to performance-based assessment), but what we test which will include broader outcomes than just academics.

Now we are beginning to get a more complete picture of Primary School, and why it is in the law.

LITERATURE AND RESEARCH

The following is a brief review of the literature and research related to current practices and findings relative to the education of young children and education reform in the early childhood arena. Findings from independent bodies or research in varied fields, such as cognitive learning, language acquisition, social context, cooperative learning, literacy, and effective schools support the movement toward developmentally appropriate practices, mixed age and ability grouping, continuous progress (non-pretention), and other changes as we conceptualize Primary School. Much of the information which follows is drawn from the document Developing an Appropriate Learning Environment for Children Five Through Eight Years Old developed by the Southern Association on Children Under Six (SACUS).

THEORETICAL BASE

Cognitive Development

Jean Piaget, Swiss psychologist, spent fifty years studying and observing children and describing for us stages of cognitive development. He contended that every individual constructs reality for himself, so that "knowing" is an active process of reacting to the environment. Young children at the concrete-experiential level, usually about age 3 -7, learn through hands-on activities and manipulation of real objects. They learn by doing. Piaget also stressed the interrelated nature of the development of the "total child" - affective and psychomotor stages as well as the cognitive stages - and that the curriculum must address development in all areas and recognize that all areas do not develop at the same rate, even within the same child.

Howard Gardner of Harvard University has developed a theory of multiple intelligences. In his book, Frames of Mind, he identifies seven types of intelligences apparent throughout the world and with persons of various abilities. In addition to linguistic intelligence and mathematical/logical, the two areas we typically recognize as intelligence, Gardner identified musical, visual/spatial, kinesthetic, interpersonal, and intrapersonal intelligence. He contends that we are ignoring a large percentage of human potential when we confine our educational programs to developing linguistic and mathematic/logical intelligences and encourages opportunities in the classroom and within the curriculum for all intelligences.

Brain-based Education

Research related to brain hemisphericity makes a strong case for emphasizing both right-brain and left-brain related problem-solving and sensing experiences in order to help the brain reach maximum efficiency levels. (Staley, F., 1984) This is consistent also with theories and research related to Learning Styles, such as the work of Walter Barbe and others, which emphasizes the need for varied classroom activities, instructional techniques, and experiences through receptive and expressive modes to auditory, visual and kinesthetic channels. Leslie Hart in Human Brain, Human Learning also stresses hemisphericity and "brain-compatible environments "for young children which are non-competitive, high-trust, and secure with an emphasis on "real" activities involving manipulation, making, designing and doing. Caine and Caine, in Making Connections: Teaching and the Human Brain, also emphasize "relaxed alertness" as a necessary physiological condition for learning, particularly in the young.

Curriculum and Learning Environment

Research and counseling psychologist, David Elkind, emphasizes that we are putting too much stress to learn the wrong kind of information too soon! Education is not a race! This "miseducation of young children" results in motivational, social, and intellectual damage by interfering with the natural self-directed learning style of young children. He says we need to have learning environments which encourage children to feel good about themselves as a consequence of their own achievements and choices, rather than through response to adult directions which reinforces dependence on others.

The work of Kevin Swick also emphasizes the negative effects on young children due to an over of emphasis on time (hurry and finish, see who can get done first), rigid scheduling, classrooms where space is inadequate for active exploration, and insufficient opportunity for extensive social interaction with peers and adults.

Constance Kamii stresses that teachers cannot "present" knowledge to young children; they must "construct knowledge for themselves" by internalizing their actions on real materials. (Workbooks and worksheets interfere. Children learn mechanics by rote without understanding of the concepts). She advocates, for example, that children be given arithmetic experiences that emphasize situations in daily living, such as voting on the name of a pet, and counting the votes.

Continuing research on literacy, the emergence of writing and reading processes in children, is dramatically changing the way we teach. "Whole language" approaches are sweeping the country. Children are exposed to print and print-making materials throughout the day in a supportive environment without correction or threat. "Invented spelling", and "process writing" are terms which support the notion that children learn to write by writing, and learn to read by being read to and exposed to reading their own writing. Concept and process development are the goal, and the discreet "skills" are taught and embedded in the process. This is quite different than the traditional approach of focus on the skill development first, which we have used in the teaching of reading and writing.

In addition to these areas, in 1986 the Department of Education published What Works - Research About Teaching and Learning, and First Lessons - A Report on Elementary Education in America. Excerpts pertaining to primary grade curriculum follow as derived from research gathered and studied by experts in the field:

- Children learn science best when they are able to do experiments, so they can actually see "science in action".
- Computer use by young children should be interactive and exploratory, and caution should be used in selecting software and in scheduling time for computer use as an end in itself.
- Social Studies and Geography curriculum should develop children's awareness of the world through play, games, map making, discussion, dramatization of literature, and other kinds of active learning.
- Social-emotional and moral development of children can be best developed through positive peer group relationships, and opportunities for cooperative small group projects that promote peer interaction as well as develop cognitive ability.

- Physical Fitness must become a more important goal. American children are in bad shape: 40% of boys and 70% of girls age 6-12 cannot do more than one pull-up and 25% of boys and 55% of girls cannot do any pull-ups.

- The Arts are an essential element of education, like reading, writing and arithmetic.

- The most relevant principle of instruction in the primary grades is that curriculum should be integrated. Educators should consider implementation of primary units to promote an integrated, continuous progress environment for a number of years.

Thinking Skill Development

Recent research with gifted children has led to an emphasis for all children on the development of both convergent and divergent thinking, particularly through the questioning process. Convergent thinking questions, which are by far the most typical seen in traditional classrooms, have one or a quite limited number of responses. Divergent thinking questions are open-ended or worded in such a way that listeners know there are many acceptable answers. Both strategies are acceptable, but research indicates that learning situations which force divergent thinking develop what Benjamin Bloom calls "higher-order thinking skills", which increase children's ability to see connections between and among information and situations, and also increases their willingness to take risks and be creative in exploring options for problem-solving.

EDUCATIONAL PRACTICES

Multi-age Grouping

Lillian Katz, in The Case for Mixed-Age Grouping in Early Education, has synthesized the research on multi-age grouping of young children. Her analysis of twenty-five studies relative to academic achievement indicate that three favored traditional grouping, twelve were inconclusive, and ten favored multi-age grouping. The analysis of fifteen studies relative to social development indicates none favored traditional grouping, six were inconclusive, and nine favored multi-age grouping. She concludes that multi-age grouping in the primary schools probably offers advantages over age-graded grouping for both academic achievement and social development outcomes. (page x., introduction)

Bruce Miller's synthesis of research on multi-age grouping in The Multi-grade Classroom, after reviewing twenty-one quantitative studies, concludes:

- Students in multi-grade classrooms perform academically as well as students from single grades.

- Students in multi-grade classrooms generally have more favorable attitudes toward their peers and school than students from single-grade classrooms.

Multi-ability Classrooms

Slavin's research (1987, 1988, 1989) on ability grouping in elementary schools reported that various plans had differential effects on student academic achievement.

- Ability-grouped class assignment. Assigning students to self-contained classes according to general achievement or ability does not enhance student achievement.

- Within-grade regrouping. The research is unclear regarding the academic achievement outcomes when students attend ability-grouped classes for a period of the day in reading and math. There is some evidence that such plans can be effective provided that the level and pace of instruction is adapted to the regrouped class.

- Pull-out programs. The most commonly used pull-out programs are in remedial reading or math, or special education, and use a diagnostic-prescriptive model. These programs have shown no evidence of effectiveness. However, one-on-one remedial tutoring programs (using older or more capable students or volunteers) and computer assisted instruction using drill and practice programs have demonstrated convincing evidence of effectiveness.

- Within-class ability grouping. There is evidence to support this practice in math for upper elementary grades if the number and size of groups is kept small.

- Joplin and Nongraded levels plans. There is good evidence that grouping students across grade levels for reading and math has consistent positive effects on academic achievement. Caution must be used to ensure that grouping lower-level students does not result in reduced expectations, second-class instruction, and ultimately, second-class futures.

Cooperative Learning/Peer Tutoring

Students helping and learning from each other, and in the process becoming more independent learners by having more strategies to find information than from just asking the teacher, are greatly enhanced in multi-age and multi-ability settings.

Johnson and Johnson, at Johns Hopkins University, are getting outstanding empirical results indicating benefits of multi-age/multi-ability cooperative learning groups on academic and social measures for all students, particularly for gifted learners. Their findings as reported in Circles of Learning indicate that high achieving students working in heterogeneous learning groups score higher on retention tests than do high achievers who participate in competitive or individualistic learning situations. Also, while bright students are often resented and sometimes ostracized in a competitive setting, they are seen as desirable partners in a cooperative setting.

In The Jigsaw Classroom, Eliot Aronson reports similar results for peer tutoring models in general. A research team headed by Ronald Lippitt found that tutors show improved attitudes and interest in school, increased ability to get along with others, and increased self-respect and belief in their own ability. Both tutors and pupils showed academic gains. Spencer Kagan, in Cooperative Learning: Resources for Teachers, says, "As teachers, we know that we continually learn more about the topics we teach in the process of teaching others".

Bruce Miller, in The Multigrade Classroom, (page 206) lists the following documented effects of cooperative groupwork as having positive effects equal or superior to traditional forms of instruction in seven general areas:

- Academic Achievement. Students had higher achievement than competitive or individualist learning structures across all age levels and subject areas when held accountable for their learning.

- Ethnic Relations. Slavin (1983) examined 14 experiments involving classrooms with diverse ethnic populations. Cooperative workgroups have a dramatic positive affect on race relations as compared to traditional learning structures.

- Social Skills. Over thirty (30) studies have demonstrated that cooperative learning groups improve student social skills and increase the variety of social strategies needed to work cooperatively with others. These include problem-solving, empathy, willingness to give and receive help, communication skills, and learning how to reward the behavior of fellow classmates. (Johnson and Johnson, 1984, Kagan, 1989)

- Self-Esteem. Slavin (1983) reports eleven studies (11) of fourteen (14) reviewed favor cooperative workgroups. None showed a negative effect, and none favored traditional learning structures.

- Self-Direction. Kagan (1989) reports students in cooperative learning classroom demonstrate more internal control of learning and appear to be more internally motivated than students from traditional classrooms.

- Liking Class. About one-half of 22 studies reviewed by Slavin (1983) for indicators of positive school climate favor cooperative learning classrooms.

- Role-taking Abilities. Students in cooperative learning workgroups show increased ability to assume different cognitive and affective roles (Rosenholtz and Cohen, 1983, Johnson and Johnson, 1983).

Nongraded Primary Schools

Barbara Pavan, (1973, 1977) has reviewed 37 research studies comparing schools having nongraded classrooms with graded classroom and reports the following results:

- Comparisons using standardized achievement tests favor nongradedness.
- Comparisons using a mental health component favor nongradedness.
- Fewer children spend longer-than-usual time in nongraded schools.
- It is particularly beneficial for blacks, boys, and underachievers to be in a nongraded environment.

She further notes the evolution of the concept of "nongradedness" with a shift from the organizational and administrative types of programs (such as a sequence of levels in math and reading) to a broader more humanistic and child-centered developmental approach and indicates that levels is not the ungraded package.

Testing and Retention

In a 1989 analysis of 63 controlled studies, in which retained students were followed and compared with children of similar achievement who went directly to the next grade, Thomas Holmes of the University of Georgia found that youngsters who were held back actually performed worse than those who were not. Their behavior, school attitudes, and attendance were also poorer.

Children perceive retention as punishment, and Deborah Byrnes reports that only 6% of retained students felt positive about the experience. In a highly quoted study by Yamaoto, (1980), young children rated the prospect of repeating a grade as more stressful than "wetting in class" or being caught stealing. The only two life events rated as more stressful than being retained were going blind or losing a parent.

Researchers of the dropout phenomena have consistently found that retention is a consistent predictor of dropping out, and students who repeat two grades have almost a 100% probability of dropping out.

Kindergarten and first grade retentions have escalated dramatically during the 80's, and results found by Lorrie Shepard, (1989), indicate that the short and long-term negative effects found in other studies are consistent with her findings. She suggests this trend may have originated because schools and parents wanted students to learn more, faster, but inappropriate curriculum and instruction has actually resulted in children learning less. For example, kindergarten and many first grade children can learn addition and subtraction if given beads or blocks to count, but will fail if expected to learn from flash cards and worksheets. Young children, however bright, are in a concrete state of learning and are not ready for symbolic representation.

Testing and assessment of young children, for "readiness" for school and for promotion, are contributing to the retention problems. Experts in early childhood education are currently recommending that standardized, pencil-paper tests are inappropriate and should not be used with young children until age 8 or third or fourth grade, and that tests should not be used to delay children's entrance into school. It is in fact those who are most likely not to do well on the tests who need the intervention! They are recommending that student progress be measured through portfolios and observation of student work. (NAEYC)

Thematic Instruction

The High Scope, K-3, Integrated curriculum is a hands-on, developmental approach which focuses instruction and the curriculum around "key experiences", or themes in a cooperative learning setting. Longitudinal studies show good research supporting these methods in primary grades, with increased intellectual gain, long-term effects of reduced delinquency and drug abuse, less parent conflict, and higher expectations for educational attainment than those students in the teacher-directed (DISTAR) programs.

In addition to the information reviewed above, which focuses on the young learner, Effective Schools Research supports participative management, professional collegiality, and high parent involvement as characteristics of effective schools in which children learn at any level - elementary, middle, or secondary.

The Literature and Research base is rich and extensive supporting change in Primary education. The information presented is but a sampling of that available.

PROGRAM VISITATIONS
PRIMARY PROGRAM RESOURCE SCHOOLS

As Department of Education staff and practitioners across the state began exploration of Primary School, in addition to reviewing the literature and research on early elementary education, we searched for schools which identified themselves as primary schools, ungraded schools, or nongraded schools. We found some in Kentucky, Vermont, Indiana, Ohio, and elsewhere. (These Resource Schools are described in detail in the Technical Assistance Section of this document.) Usually we found one school in a district where the program was developed by the teachers themselves who came to question the traditional methods they were using. Many times it was one approach or one theory or idea which got them started. As we talked to principals and teachers in these buildings and visited some, we found many common elements in the programs, regardless of the philosophical or theoretical base from which they started.

The Essex Elementary School in Vermont began modifying their program as they implemented whole language and literature-based reading 8-10 years ago. Multi-age grouping evolved with teachers remaining with the same children up to three years. Research in Cooperative Learning led to more systematic use of mixed-ability grouping. The teachers designed a curriculum to develop the "whole child" with manipulative math and activity-based science. More child-directed learning has evolved with the curriculum integrated around "themes". Evaluation of student work is done through the collection of work samples and observation in the classroom. Parent involvement in the program is extensive.

The Key School in Indianapolis began with an idea shared by eight elementary teachers. In 1987, they opened a unique public school with a curriculum based on Howard Gardner's Theory of Multiple Intelligences. School-wide themes are used as organizers for an interdisciplinary curriculum in heterogeneous primary classes of mixed ages and abilities. The total school environment encourages active student participation as students and teachers explore all intelligences. Alternative assessment methods, such as videotaping the students as they present quarterly projects, are used to document student progress. Program evaluation, as well as student performance, is accomplished through regular staff planning sessions. Parents are required to attend three of four conferences each year, and members of the community are extensively involved in enrichment and after-school activities.

The teachers and principal at Central Elementary in Lebanon, Indiana, looked at the current educational research and designed their program in 1990. They started with Leslie Hart's research on brain-compatible environments which emphasizes that children must have choices in their activities and a trusting non-competitive environment, and combined that with Susan Kovalik's research on thematic teaching which makes learning more meaningful by making connections across subject areas. They also use Bloom's taxonomy and Gardner's seven intelligences, and David Elkind's notions of allowing children time to learn. Their teaching philosophy emphasizes meaningful content and real-world activities to show connectivitiy in learning.

By the end of summer 1990, talking, listening, and visiting with these programs and others, the common descriptors or elements which all these "ungraded" programs seem to share began to emerge. They were:

- Integrated thematic curriculum with skills embedded in process and content
- Manipulative materials and activity-based experiences
- Continuous progress with children progressing at own pace
- Equal emphasis on social, emotional, physical, aesthetic, and cognitive development
- Multi-age grouping of children who usually stayed together more than one year
- Mixed ability grouping with very few pull-out programs
- Participative management with teachers making most decisions about the instructional program
- Extensive parent involvement
- Narrative instead of comparative pupil reporting with infrequent use of letter grades

About this time, we discovered British Columbia, Canada, the only other place we could find where a whole "system" was moving to primary schools, not just a school here and there. Like Kentucky, British Columbia was responding to a legislative mandate, which preceeded ours by one year, and required "ungraded primary programs", K-3. As we began comparing notes to what we were discovering from many different sources about good programming for primary school, we were affirmed in our findings! The list above matched very closely with the characteristics of primary schools which were evolving in British Columbia.

We began to refer to those characteristics to describe primary schools as "CRITICAL ATTRIBUTES", and even though the list was eventually refined and shortened, the notion of what type of characteristics would be evident in a program which reflected current research and practice related to early elementary education helped us formulate a vision of how primary schools in Kentucky should look at some point in the future.

NATIONAL ORGANIZATIONS

Many professional organizations, along with experts in the field of early childhood education, have increasingly felt the need to emphasize the uniqueness of four-to-eight year old children and the importance of providing them learning experiences that are appropriate for their level of development. There is a growing recognition that young children are not simply smaller versions of older children. Similarly, questions are being raised about such practices as screening children to keep them out of Kindergarten, retaining high numbers of students at K-3 levels, and using standardized test scores to determine passage to the next grade.

THE NATIONAL ASSOCIATION OF STATE BOARDS OF EDUCATION (NASBE), has recommended that public elementary schools establish primary units that are specifically designed to accommodate the uniqueness of young children and use developmentally appropriate curricular and learning materials.

THE NATIONAL ASSOCIATION OF ELEMENTARY SCHOOL PRINCIPALS (NAESP) has just recently (1990) issued their new standards for quality programs for young children. Their philosophy statement is:

> "In a quality early childhood program, the philosophy is based on an interactive approach, an approach that views children as active learners experiencing hands-on exploration of many diverse materials, freedom of movement, and spontaneous conversation with teacher and classmates. The children are provided the optimal environment for learning in their own individual manner and at their own individual level of development."

Their definition of quality early childhood programs are those that:

- Develop a positive self-image
- Enhance social and emotional development
- Expand early concepts, encourage independent thinking, and develop problem-solving skills
- Improve all communication skills
- Stimulate interest in the real world
- Increase the child's capacity for self-discipline
- Advance the development of fundamental motor skills and abilities
- Identify special individual mental, social, emotional, or physical needs
- Further the development of respect for human dignity and for the rights of others
- Promote aesthetic appreciation and expression
- Encourage creativity
- Give and receive sincere affection

NAESP and other groups are convinced that it has been a mistake to allow Kindergartens to become mini-first grades, heavy with pencil and paper work, skill mastery requirements, and testing to determine promotion and retention. Many children are not developmentally ready to handle this program even in first grade. The beginnings of school failure, they say, can be traced to Kindergartens and early grades in which the self-confidence of children and the love of learning are being destroyed by inappropriate practices.

THE ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT (ASCD) Identified four basic curriculum guidelines based on the work of Gessell, Piaget, Montessori, and Bloom.

1. Early childhood education should focus on the "total" child, taking into consideration the cognitive, affective, and psychomotor growth of the child.

2. The curriculum must be organized around the developmental needs, interests, and learning styles of each child, rather than around a single text, curriculum guide, or time schedule.
3. The learning environment must encourage active participation on the part of each child, so that children can learn through observation, exploration, and verbalization. Self expression should be encouraged through writing, drawing, and movement activities.
4. In an early childhood classroom "how" the curriculum is taught is as important as "what" is taught. Process is as important as product for the young child.

THE NATIONAL ASSOCIATION FOR EDUCATION OF YOUNG CHILDREN (NAEYC) defines early childhood as birth through 8.

In 1988, NAEYC released a position statement on developmentally appropriate practice in the primary grades. This statement was particularly critical of curriculum which is narrowly focused on the intellectual domain with intellectual development narrowly defined as acquisition of discreet, technical academic skills, without recognition that all areas of children's development are interrelated. The statement also deems as inappropriate curriculum that is divided into separate subjects where time is carefully allotted for each with primary emphasis given each day to reading and secondary emphasis given to math.

The argument is offered that life is not separated into discrete compartments. Knowledge learned in school must be integrated in solving daily problems and developing new knowledge structures. Therefore, curriculum is to be organized in such a way as to promote several content area "truths" to be taught through one theme or unit of study. Knowledge and skills are taught sequentially. In order for this to be accomplished, curriculum planners (teachers) must be familiar with child growth and development principles as well as subject area content and skills continuum.

SOUTHERN ASSOCIATION ON CHILDREN UNDER SIX (SACUS)

The Southern Association of Children Under Six (SACUS) is a regional organization that is very active in Kentucky and other southern states. It grew out of a need for professionals interested in the care and education of young children in the South to discuss and act upon their mutual problems and concerns.

In 1990, SACUS released a position statement entitled "Continuity of Learning for 4 to 7 Year Old Children." SACUS takes the position that children grow and learn as whole persons; therefore, it's impossible to separate cognitive and affective (social, emotional, physical, and aesthetic) growth. Children learn through active engagement and through conversation and dialogue concerning their experiences; therefore, natural interactive conversation enhances learning more than explaining or "talking" to children. Children learn quickly when material is presented in meaningful ways at appropriate times.

SACUS also takes the position that early childhood educators need special training and education. Likewise they need opportunities for continued growth and to develop collegial relationships with others.

The research base related to effective educational practice K-3 is extensive and growing. Young children learn in ways that are somewhat similar to ways in which adults learn, and yet their learning is of a somewhat different nature. A summary of the principles upon which good programs for young children are built might look like the list on the following page.

PRINCIPLES TO CONSIDER IN PLANNING FOR YOUNG CHILDREN

1. A child learns as a total person. Knowledge and skills must be learned through all areas...physical, social, emotional, and intellectual...to help children learn how to learn and to establish the foundation for continuous life-long learning.
2. Children grow through similar stages of development, but at different rates and in different styles. Every child is unique. Different levels of development and understanding affect every learning task. Children must be allowed to move at their own pace in acquiring skills. Most will learn these in their own time by the age of seven or eight years old.
3. The way a child feels about him/herself and the sense of competence he/she has in relation to learning impacts every learning act. The way a child receives information may be as important to learning as the information received. Methods, climate, atmosphere, and teacher attitude all affect the child's self esteem.
4. Children learn best in active ways through interaction with the environment and with people. Teacher planning time is best spent preparing the environment for active learning. As children interact with each other, with the teacher, and with a variety of materials, they apply all types of learning processes.
5. Children learn best when they are taught through an integrated curriculum that allows for pattern-building and selection of a wide variety of sensory data. Projects, learning centers, and real-life activities related to the interests of children promote learning of concepts and skills through application and meaningful practice.
6. Children cannot be given knowledge. They must construct it for themselves through continuous action of the environment. Knowledge is constructed as a pattern of mental representations. It can only be constructed through action on materials. Each child's construction of knowledge is personal and unique. No two children, therefore, come to know something in exactly the same ways. Playful activity is the natural method of learning for young children.
7. Learning is a very social process. As children converse with others about interesting projects and ideas, they expand their language and their thinking. Through conversation about the happenings in their lives, children are encouraged to develop their thought and language processes. It is not through modeling that such development is possible but though application.
8. Children learn the skills of communication and expression when they are given many opportunities to share their learning with others through a variety of forms. In a good language and literacy program, children are encouraged to expand their abilities to communicate orally, as well as through reading and writing.
9. Children learn math skills and processes when they are encouraged to explore, discover, and solve real mathematics problems through both spontaneous and planned activity. The math program in the elementary school should be designed to interest children in thinking and organizing experiences in mathematical ways rather than to teach rote computation.
10. Children learn best when the classroom environment is organized, but flexible, and when developmentally appropriate tasks are encouraged. Disorganization, inappropriate expectations, and emphasis on paper-pencil activities too soon lead to stress and stress-related illness in young children.

From Developing an Appropriate Learning Environment for Children Five through Eight Years Old, (SACUS), 1990.

RATIONALE

After careful study of all the information presented in the BACKGROUND section, we can now answer the question "What is Primary School?"

Primary School is a new way of thinking about the first four years of educational experience for a child - one that takes into account the characteristics of young children and how they learn, and also one that incorporates the principles of KERA regarding how learning will be different after reforms are enacted. The new way of thinking must also incorporate the most current findings in the literature and research about practices that have been determined to characterize effective primary programs. These characteristics, may be considered "critical attributes" of an effective primary program.

What we need, then, is a new framework or "Paradigm" to capture this new way of thinking - a new set of parameters which reflect how the Primary School is different than the Traditional K-3 School. Some of these parameters will apply to the graded 4-12 structure since they are driven by the provisions of KERA, but other parameters of the Paradigm will be driven by the unique instructional needs of young children and the critical attributes of a program which effectively addresses those needs.

A cadre of local district practitioners, university personnel, and Kentucky Department of Education staff have developed a set of materials which evolved over time and capture what we have learned in our "exploration" of primary school. On the following pages, the Guiding Principles, Primary School Position Statement, Critical Attributes of the Primary School, and Kentucky's Paradigm for Primary School, "define" Primary School in Kentucky.

As we developed this new paradigm, this new way of thinking about early elementary education, we questioned it.

- Does our conceptualization of Primary School honor provisions of KERA?
- Does it incorporate what we know about how young children learn?
- Does it address curriculum, assessment and learning environment changes likely to lead children to achieve the valued outcomes/goals?
- Does it permit extensive decision-making at the local level?
- Does it actively involve parents as partners with the school in their child's learning?
- Does it promote teamwork and collegiality among professional staff?
- Does it foster a love of learning in children?

We believe our new paradigm, enables us to answer "yes" to the above questions and provides a conceptual framework for making Primary School a reality in Kentucky.

We believe we will succeed in this endeavor, and will far exceed the accomplishments of previous reforms which had some common characteristics. For example, the "ungraded" or "non-graded" programs in the past were much narrower models, and did not take into account the notions of developmental appropriateness and educating the ":whole child" to the extent that the nongraded movements of the 90's do. In Kentucky we call our program "Primary School", rather than "Ungraded Primary School", because the definition and tenets consistent with and required by KERA are broader than the concept of "ungradedness". The Primary School in Kentucky is ungraded, but it is many other things as well, as is evident in the Paradigm. The primary school, as part of a larger reform initiative also has many factors supporting to it's success. These factors are identified in the following list.

WHY PRIMARY SCHOOL PROGRAMS IN KENTUCKY WILL SUCCEED

1. In Kentucky it is a system-wide change, not just a pilot, or an experiment as was tried in the 60's and 70's, and even in other "primary school" movements today, where a single school or a district is trying to change practices. This will help with parental acceptance and support withnin the educational system. Everybody is changing!

2. There is a rich and extensive literature and research base from several fields supporting the changes in early elementary education.

3. There is Technology to help - in both managing instruction and individualizing instruction for all learners.

4. There is more flexibility in use of special teachers to assist with the learning process and program in the regular class environment. This is supported by research which discourages "pull-out programs" and this can also help reduce pupil-teacher ratio.

5. There is a long history to support that what we're doing now doesn't work to accommodate children with diversity in backgrounds and abilities. We have too many early retentions, and dropout levels that are too high.

6. Our society is experiencing changing demographics. There is greater diversity in the population and a greater need for change. More children are "at risk" due to fetal alcohol syndrome, in utero addiction, aids, Attention Deficit Disorders, deterioration of the family structure, and other factors. There are more children for whom our traditional educational system does not work.

7. KERA provides supplementary Programs to help ensure success in primary school, such as preschool, extended school servcies, family resource centers, funds for technology and staff development for teachers.

KENTUCKY IS THE RIGHT PLACE
AND NOW IS THE RIGHT TIME
FOR PRIMARY SCHOOL !

PRIMARY SCHOOL

Guiding Principles

The Primary School is a place where a child's natural impulse to wonder and explore is nurtured and encouraged. It is a place that encourages the development of the whole child. Intellectual, social, emotional, physical, aesthetic, and cognitive needs are all recognized as important areas to be developed. The Primary School is a warm, safe place that encourages children to excel in their areas of strength and supports them in areas where they need additional help. The following assumptions are made for any quality primary school program:

Children are active and involved when they are learning.

Children learn in a variety of ways and at different rates.

Children learn on their own and from each other.

Children are taught and encouraged to be self reliant and independent learners.

Children are encouraged to excel in their areas of strength.

Curriculum at an exemplary primary school is developmentally appropriate for every child.

Curriculum and delivery of instruction in an exemplary program promotes learning to learn.

Instruction at an exemplary primary school takes into account a wide range of abilities and learning styles.

An exemplary primary school program provides a safe, predictable environment for every child.

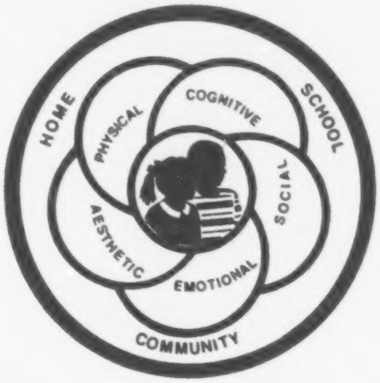
An exemplary primary school employs management styles that accommodate flexible groupings of teachers and children.

An exemplary primary school provides progress reports to parents that compare their child's work to observable, measurable outcomes rather than to other children.

Modified from Jefferson County Public Schools

PRIMARY SCHOOL POSITION STATEMENT

The primary school is that part of the elementary school program in which children are enrolled from the time they begin school until they are ready to enter the fourth grade (KRS 158.030(1),(2)). An appropriate primary program for all children recognizes that children grow and develop as a "whole," not one dimension at a time or at the same rate in each dimension. Therefore, instructional practices should address social, emotional, physical, aesthetic, as well as cognitive needs. The primary program flows naturally from preschool programs and exhibits developmentally appropriate educational practices. These practices allow children to experience success while progressing according to unique learning needs and also enable them to move toward attainment of the educational goals and capacities of the Kentucky Education Reform Act in an environment which fosters a love of learning. Developmentally appropriate educational practices, multi-age/multi-ability classrooms, continuous progress, authentic assessment, qualitative reporting methods, professional teamwork, and positive parent involvement are evident in the Primary School and are considered critical attributes of the program.



CRITICAL ATTRIBUTES OF KENTUCKY'S PRIMARY SCHOOL PROGRAM

Kentucky's Primary School Program Position Statement identifies seven critical attributes as indicated in bold type below. The "bullets" under each are examples of the critical attribute, and represent strategies a school may choose, as well as others they may develop, as they write an Action Plan for Implementing the Primary Program.

Developmentally Appropriate Educational Practices
- Integrated curriculum
- Active child involvement, interaction, and exploration
- Use of manipulatives/multi-sensory activities
- Balance of teacher-directed and child-initiated activities
- Varied instructional strategies and approaches such as whole language, cooperative learning, peer coaching/tutoring, thematic instruction, projects, learning centers, and independent learning activities, etc.
- Flexible groupings and regroupings for instruction based on interest, learning style, problem solving, skill instruction (short term), reinforcement, random, etc.

Multi-Age/Multi-Ability Classrooms
- Heterogeneous grouping
- Flexible age ranges
- Family groupings

Continuous Progress
- Students progress at own rate as determined by authentic assessment
- Promotes social, emotional, physical, aesthetic, cognitive development
- Success oriented
- Non-competitive
- Documentation of pupil progress through anecdotal records, observations, portfolios, journals, videotapes, computer disks, etc.
- Non-retention/Non-promotion

Authentic Assessment
- Occurs continually in context of classroom involvement
- Reflects actual learning experiences
- Emphasizes conferencing, observing, examining multiple and varied work samples, etc.
- Documents social, emotional, physical, aesthetic, and cognitive development

Qualitative Reporting Methods
- Descriptive, narrative, ongoing
- Reflect a continuum of pupil progress
- Varied formats such as portfolios, journals, videotapes, narratives, etc.

Professional Teamwork
- Securing regular time for planning/sharing
- Varied instructional delivery systems such as team teaching, collaborative teaching, peer coaching, etc.
- Regular communication among all professional staff (PE, Music, Art, Special Education, Gifted, Chapter 1, etc.)

Positive Parent Involvement
- Home/school partnerships
- School/Community partnerships
- Continuous information exchange

KENTUCKY'S PARADIGM FOR PRIMARY SCHOOL

This is a table for viewing the Paradigm shift as a continuum of change. The KERA goals and capacities along with the Critical Attributes of the Primary Program are driving forces that are changing the Paradigm. Most schools are between the ends of the spectrum rather than at either pole.

FROM TRADITIONAL SCHOOL CONCEPTS (K,1,2,3) → →	→ KERA GOALS/CAPACITIES PRIMARY PROGRAM CRITICAL ATTRIBUTES → →	TO PRIMARY SCHOOL CONCEPTS
	PHILOSOPHY	
Uniformity is valued	Self Sufficiency	Diversity is valued
Group norm - "child must fit the school"	Group Membership	Individual norm - "school must fit the child"
Extrinsic motivation	Integrating Knowledge	Intrinsic motivation
Emphasis on cognitive development	Cultural Diversity/Arts	Emphasis on "whole child" - social, emotional, physical, aesthetic, and cognitive
	. . . .	
Child as dependent	Child Development Research	Child as partner in learning
	ORGANIZATION	
Graded		Ungraded
Age-level, ability-grouped	Group Membership	Multi-age, multi-ability
Grouping is static	Integrating Knowledge	Flexible grouping and regrouping
Child assigned individually to teacher for one year	Cultural Diversity/Arts	Family grouping - groups of children remain together with same teacher(s) for more than one year
	. . . .	
Segregates (special programs/population)	Child Development Research Multi-age/Multi-ability Groupings	Integrates (inclusionary, mainstreams)

KENTUCKY DEPARTMENT OF EDUCATION

FROM TRADITIONAL SCHOOL CONCEPTS (K,1,2,3) → → →	KERA GOALS/CAPACITIES PRIMARY PROGRAM CRITICAL ATTRIBUTES → →	TO PRIMARY SCHOOL CONCEPTS
	CURRICULUM	
Graded	Using Basic Skills Applying Core Concepts Self-Sufficiency Group Membership Cultural Diversity/Arts Thinking/Problem Solving Integrating Knowledge . . . . Child Development Research Multi-age/Multi-ability Groupings Professional Teamwork	Ungraded
Separate subjects		Integrated or correlated subjects
Prescribed sequence (lock-step)		Developmental sequence (variable)
Established (preset material is covered)		School/teacher determined (children's capacity to learn is extended)
Focus on 3 R's		Focus on concepts, skills, processes, and attitudes
Limited multi-cultural content.		Content expanded, multi-cultural content
Work and play divided		Play is a type of work for young learners
Fixed daily schedule		Flexible time
	INSTRUCTION	
Sequential skill development	Using Basic Skills Applying Core Concepts Self-Sufficiency Group Membership Cultural Diversity/Arts Thinking/Problem Solving Integrating Knowledge . . . . Child Development Research Multi-age/Multi-ability Groupings Professional Teamwork	Solving real-life problems learning skills as needed
Rote learning		Conceptual learning
Verbal informational emphasis		Constructivist, problem-solving, thinking emphasis
Grouping by skill ability		Grouping by interest, learning style, and learning needs
Child is recipient of the teacher's training		Children are collaborators in own learning and learn from each other as well as from the teacher
Child as passive learner		Child as active learner
Workbooks		Concrete materials, quality literature, and a variety of resource materials
Whole group instruction		Whole group, small group, and individual instruction
Individual tasks		Balance of small group, cooperative, and individual tasks
Teacher directed		Balance of child initiated and teacher directed
Answers are valued		Questions are valued

KENTUCKY DEPARTMENT OF EDUCATION

FROM TRADITIONAL SCHOOL CONCEPTS (K,1,2,3) → → →	KERA GOALS/CAPACITIES PRIMARY PROGRAM CRITICAL ATTRIBUTES → →	TO PRIMARY SCHOOL CONCEPTS
	ASSESSMENT	
Grade level expectations	Using Basic Skills Applying Core Concepts Thinking/Problem Solving Integrating Knowledge . . . . Child Development Research Authentic Assessment Qualitative Reporting Continuous Progress	Continuous progress toward KERA valued outcomes
Focuses on what a child already knows		Focuses on how a child learns and what a child "can do"
Paper and pencil representations		Multiple ways of representing knowledge
Single correct answer		Alternative solutions
Discreet "events" for classification and reporting.		Ongoing for instructional decision-making and reporting
Reporting is competitive/comparative (A-B-C-D-F).		Reporting is individualized and narrative
Teacher as sole arbitrator of what is correct.		Children as theory builders and negotiators
	LEARNING ENVIRONMENT	
High expectations for performance of SOME students	Using Basic Skills Applying Core Concepts Self-Sufficiency Group Membership Thinking/Problem Solving Cultural Diversity/Arts Integrating Knowledge . . . . Child Development Research Multi-age/Multi-ability Groupings Continuous Progress Professional Teamwork Parent Involvement	High expectations for performance of ALL students
Competitive (some win, some lose).		Cooperative
Failure/retention accepted for some.		Success expected for all
Limited opportunity for social interaction		Extensive opportunities for social interaction
Rigid physical environment.		Tables, learning centers, natural settings, varied materials, activity areas
Silence, limited movement and interaction.		Purposeful movement and interaction encouraged
Pupil perceptions of self and others tied to academic success.		Successes in other areas of development are recognized and valued
Structure limits adult collegiality and collaboration		Structure encourages adult collegiality and collaboration
Parental contact revolves primarily around grades and promotion/retention issues.		Parental contact is progress-focused/parents are more involved in the learning process
Timed expectations for learning/performance.		Child paced, time permitted

OPERATIONAL FRAMEWORK

The operational framework for Primary School consists of the following stages:

EXPLORATION

(Awareness) Understanding the Change

Reading, attending conferences, visiting resource schools, sharing and discussing with others – finding out about Primary School.

- Why do we need to change? Why the mandate? (Knowledge/research base)
- What is the new paradigm? - Traditional vs. Primary School
- Who is teaching this way and how is it going? Identify resources - people, materials and schools
- Create a vision for Kentucky Primary Schools.
- Develop cadres of local practitioners and university personnel to expand scope of staff development and implementation strategies.
- Develop Position Statement, Critical Attributes, and resolve Key Issues.
- Develop an Implementation process which acknowledges/incorporates principles of effective change.
- Gather baseline data of attributes and beliefs of primary educators. (Statewide survey of principals and teachers)
- Envision a process to build the capacity of Kentucky Primary educators to shift from a skills-based program to a literacy-based program, and to undertake other changes necessary to transform early elementary education to achieve the vision.
- Develop regulations governing operationl procedures for developing an ungraded primary program.

ORIENTATION

(Preparation) Getting Ready for the Change

Applying information gained from the Exploration stage to district, school, and individual considerations of Philosophy, Curriculum and Instruction, Organization, Assessment, and the Learning Environment for Primary School. During Orientation, studies of the district curriculum should be made in order to align it with the Curriculum Framework and the Valued Outcomes at the fourth grade level. Assessment strategies and the Continuous Assessment Program should be re-examined as well. District decision-makers and School Councils (where they are in place) should be involved in these processes.

During the Spring of 1992 each school must develop an Action Plan to implement a Primary School Program in accordance with their decisions in each of these areas. The Action Plan may cover a period of several years, with completion by the beginning of the '95-'96 school year.

- Ownership will be essential - so will trust, support and leadership. Teachers and administrators will not change simply by being told to change.

- Build a philosophy - as individuals and as a staff.

- Identify starting points:

    - Where am I as a teacher? What am I already doing that will work well in primary? What competencies, knowledge, skills do I need to develop?

    - Where are we as a staff? What are priorities for training and networking teachers?

- Parents (at least key parents or parent groups) should be part of planning, even at the orientation stage.

- Support the development of resource schools as delivery sites (Pioneers).

- Provide opportunities for extensive staff development as individuals and faculties.

- Develop focus observation sheets for observing in resource or model schools and classrooms.

- Develop criteria for completion of primary school which considers the "whole" child – social, emotional, physical, aesthetic, as well as cognitive. Program completion should be an individual decision for each child.

- Needed curriculum changes must be addressed at the building level taking into consideration the outcomes necessary to achieve goals at fourth grade level. OUTCOMES WILL DRIVE CURRICULUM CHANGES.

- Each school must develop a written Action Plan.

IMPLEMENTATION

(Action) Putting Change into Practice

Implementation is a process, not an event. Each school begins implementation of their Action Plan no later than the 1992-93 school year. Schools may move through several "phases" on the Continuum of Change from Traditional School to Primary School over a several year period. The format and examples of Action Plans are under development. However, three Samples of Phases in Implementing Primary School, (Plan A, Plan B and Plan C), are included in the Overview section. Some schools are already moving into or may wish to move into the Implementation Stage earlier than 1992-93. The sample phases for implementation may occur anytime during the Implementation stage and are not necessarily tied to the school year designations.

- Implementation begins with understanding and is an evolution, not a revolution.

- Building-level implementation plans must reflect continuous progress, over time, addressing all critical attributes within a 2-3 year period.

- Go slowly and help teachers (staffs as well) take steps as they are ready. Diversity among teachers, as well as that among children, must be acknowledged and accepted. Start where they are and grow.

- Levels of Implementation within the Action Plan will reflect progressive movement on the continuum of change from Traditional School to Primary School.
- Collaborative planning by the primary staff is critical.
- Evaluate the Action Plan and make changes as needed.

  Determinating factors are:

  - What criteria are to be used to decide if adequate progress is being made?

  - Who is responsible for evaluating the change?

  - Are pupil outcomes supporting the change?

- Conduct follow-up survey to primary educators during Spring '93.

POLICY ISSUES

Concerns and Resolutions

During the months since the passage of the Education Reform Act, many questions and issues have been raised surrounding Primary School. These concerns have generally focused on the following areas:

1. Implementation
2. Entering the Primary School Program
3. School and Class Organization
4. Inclusion of Special Needs Learners
5. Planning Time for Teachers
6. Textbook Funds
7. Regulation Development
8. Completing Primary School
9. Teacher Training
10. Certification
11. Kentucky Internship Training Program
12. Public Awareness/Parent Information

Resolution statements on these "key issues" have been developed and are presented on the following -pages. Some statements are more comprehensive than others. Hopefully these "KEYS" will "open doors to understanding" and enhance the planning process in local districts.

Some additional issues which are currently being studied are:

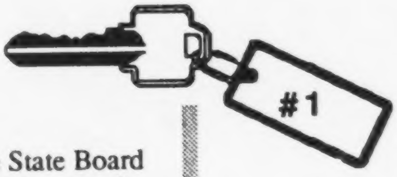
- How will coordination with Federal Programs, such as Chapter 1 and Special Education be handled?
- What is the relationship between the Continuous Assessment process and the Performance-Based Assessment process, and how will they be operationalized in Primary School?
- What is the role of the school council and site-based decision-making in the Primary School Implementation process? What about schools where there is not yet a council?

Additional issues will arise and require resolution as the Primary School initiative progresses.

Q. What does "implementation" by 1992-93 mean?

Q. What must an individual school do, or have in place, by 1992-93?

IMPLEMENTATION



The Kentucky Education Reform Act of 1990 requires that the State Board for Elementary and Secondary Education shall adopt administrative regulations for procedures for developing an ungraded primary program which shall be implemented by the beginning of the 1992-93 school year (KRS 156.160,(1),(a)). In order to implement effective Primary Schools in Kentucky in accordance with the Position Statement and Critical Attributes, we must change our teaching practices to match our knowledge base of how young children learn. Change is gradual and continuous, and occurs only with understanding, acceptance, and support. Therefore, implementation begins with understanding and is a process, not an event.

The Primary School Initiative in Kentucky may be viewed in three phases: Exploration, Orientation, and Implementation.

Exploration is the awareness stage. This is the time to develop understanding and a vision of the new paradigm for primary school, as well as a framework enabling Kentucky primary educators and families to transform early elementary education to achieve this vision in their community.

Orientation is the preparation stage. This is the time to build ownership, plan, and get ready for the change. It involves the development *of individual and building level philosophy (*What do we believe?*), self-study (Where am I as a teacher? What am I already doing that will work well in Primary?* What competencies, knowledge, and skills do I need to develop?*), building level planning (Where are we as a staff? What are the priorities for training and networking teachers? What curriculum changes are needed? How should parents be involved?*), and intensive staff development activities. By Spring of 1992, each building will develop a written action plan for a two or three year period identifying a continuous progress process to address every Critical Attribute each year. This action plan must ensure full implementation of all Critical Attributes no later than 1995-96 when performance-based standards will be in place. The action plan should put in place a systematic process to develop a curriculum, instructional methodologies and a learning environment which will enable students to move to fourth grade with a four-year primary school experience. For some children, primary school will be supplemented with preschool, extended school services, instructionl technologies and services through a Family Resource Center in order for this goal to be met.

Implementation is the stage to begin putting the action plan into practice. Implementation is an evolutionary process. We must go slowly and assist teachers as individuals and as a staff to grow as they are ready. Diversity among teachers and buildings must be acknowledged and accepted. They must be allowed to start where they are and grow. Strong leadership, collaborative planning by the primary staff and parents, as well as comprehensive staff development will be essential. Criteria to evaluate and modify changes, and to determine a process to gauge adequate progress toward attainment of the Critical Attributes will be developed. Buildings will be held accountable to implement the action plans they develop.

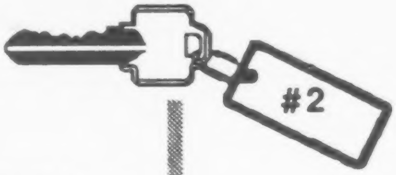
Approached correctly, with adequate time for understanding, acceptance, and skill building, Primary School will become a joyous reality in Kentucky.

Q. Is Kindergarten part of Primary School?

Q. How will children in half-day programs be integrated with older children?

Q. May a child who is already 5 by October 1 remain in pre-school if that is developmentally appropriate for that child?

ENTERING THE PRIMARY SCHOOL PROGRAM



The Kentucky Education Reform Act of 1990 defines the primary school as that part of the elementary school program in which children are enrolled from the time they begin school until they are ready to enter the fourth grade (KRS 158.030,(1),(2)). This mandates the integration of the Kindergarten concept and principles into the primary school program. KRS 157.320(7) further states "...Kindergarten is the entry level of the primary program."

Any child who becomes five years of age by October 1 may enter a primary school program. If parents choose to delay their child's enrollment in school until the child reaches compulsory attendance age, that child will enter the first year of the primary school program at age six. Such children may have been enrolled in a pre-school program.

School districts are required to provide at least a half-day program for children entering the first year of the primary school (KRS157.320,(7)). They may exercise the option to provide a full-day program. Individual program decisions for children determined to be eligible for special education services under P.L. 101-476 (formerly P.L. 94-142) should be made by the appropriate Admissions and Release Committee and documented on the Individual Education Program. In support of the non-retention and continuous progress characteristics of primary school, no child should remain in a half-day program longer than one year.

The degree of multi-age involvement of students in the first year of primary school may vary, depending largely on building-level decision for grouping patterns (i.e., 5/6, 5/6/7, 5-8), and the extent to which teachers design classroom experiences which support developmentally appropriate practices rather than predetermined content focused on academic skill attainment. A school may choose for first year students to spend several months only with other first year students to allow the teacher adequate time to evaluate each child's developmental needs. Multi-age involvement could then be "phased-in" as determined appropriate.

Students in full-day or half-day programs may be involved all of the time, part of the time, or for selected activities with older students. For example, one school may be grouping 5, 6, and 7 year olds together during all school time; another may plan multi-age "shared activities" daily, or several times a week. Multi-age groups may be formed for projects or center activities, for thematic unit activities, or younger and older children may be paired as "buddies" in a peer tutoring approach.

Another building plan may fully integrate the morning session into multi-age classrooms, and use the second approach of multi-age groups for specific daily activities with the afternoon session. This plan would let the teachers, parents, and students evaluate the two approaches. Collaborative planning and scheduling, such as this, by school staff will permit extensive flexibility within a single building.

Options for capitalizing on the advantages of multi-age grouping for first-year students will continue to evolve over time.

Pre-School and Primary School

If a child is already five (5) years of age by October 1, and the parent(s) wishes the child to be in school, the child must be enrolled in Primary School. SEEK funds are the only state funds available for a child who is already five years of age by October 1.

Although under certain circumstances, a child who is five years of age may receive some services in a setting with preschool children, the child may not be counted to generate funds under the KERA/State Preschool Program. Such unique circumstances might include a situation where an Admissions and Release Committee has developed an Individual Education Plan and determined that the preschool class is the appropriate setting for all or part of a child's program.

Children who are five years of age are eligible for half-day services five days a week. Regardless of where the five year old child is served, they may only receive the half-day program for one year. The second year the child is in Primary School (even if he/she were served in the Preschool Program on a part-time basis the previous year) must be a full-day program or equivalent to the program available for all other second year students.

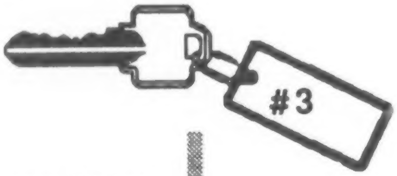
Q. How do we organize for Primary School?

Q. How much multi-age grouping is required?

Q. What about building-level organization plans that are inconsistent with the K-3 Block? (K only, K-1, K-2, etc.)

Q. Can class sizes be waived in buildings without a school council?

SCHOOL AND CLASS ORGANIZATION



Organizing the school for the successful implementation of Primary School will require that each school staff plan together and give careful consideration to the needs of the children, the staff, and the school community as a whole. All primary, intermediate and special teachers, as well as librarians, school counselors and support staff, should be involved in all stages of this process as these decisions impact the whole school. If continuous progress is to be accommodated and a smooth transition between the primary and intermediate programs ensured, the school experience must not be fragmented or school personnel isolated. It is recommended that parents be involved as well, even if the school has not yet established a school council.

Once staff members have explored the Primary School concepts and established a common set of beliefs and philosophy, reviewed the goals and capacities for students specified in KERA, and examined the Curriculum Framework and Valued Outcomes for students, they should then turn the decision-making process to what the Primary Program should look like in their school.

Age ranges in Primary School will probably vary from four (4) to ten (10) with most children in the five(5) to eight (8) range. These children will be organized differently as regards class groupings from school to school, and probably even within the same school. Although we have typically thought of students in the same "grades" as being the same "age", this is seldom the case since most "graded" classes have children with two and sometimes three age levels. For purposes of discussion here regarding class grouping, we will use the criteria of NUMBER OF YEARS IN SCHOOL to avoid this confusion.

During the evolving process, the primary school organization plan may include various arrangements of the following groupings:

- Multi-year groups - groups of children from three or four years of the Primary Program
  e.g., children in 1st, 2nd, and 3rd years, (formerly K, 1, 2);
  children in 2nd, 3rd, and 4th years, (formerly 1, 2, 3);
  children in 1st, 2nd, 3rd, and 4th years, (formerly K, 1, 2, 3).

- Dual-year groups - groups of children in the same two years of the program in one class
  e.g., children in 1st and 2nd years, (formerly K, 1);
  children in 2nd and 3rd years, (formerly 1, 2);
  children in 3rd and 4th years (formerly 2, 3).

- Single-year groups - groups of children in the same year of the program in one class. *(Note: This may in fact include children of two or even three ages.)*

Continuous progress is possible with any grouping of primary children. From an organizational perspective, dual and multi-year grouping readily accommodates non-gradedness, and continuous progress. However, some teachers may prefer to begin the primary program with single-year groupings, with which they are more familiar. Other school or community considerations could also make the latter a preferable way to organize, such as when primary age children are in two or more different facilities.

As the staff considers the many combinations and arrangements of class groupings for the school, it is important to keep in mind that not all teachers in the same building need to have the same type of grouping. Teachers may be self-contained, team teach, utilize collaborative models, team for planning multi-class activities such as team "themes" or school-wide themes or projects. Any of these approaches will honor the critical attribute of "professional teamwork", and teachers need to indicate, as a group, two or three options which would be workable within the school.

After the options are decided upon, individual teachers should indicate their preferences, which should, if at all possible, be honored. Each teacher will be somewhere on the continuum of change, and should be supported. This will help ensure that teachers enter this process with the confidence to be effective with their class and to be positive about the direction in which the school is moving.

Building Plans

Several districts have asked how they should approach organization for Primary School if they have first year students (what we now call Kindergarten) in a building separate from the other primary students, or first and second year separate from third and fourth year, etc. The critical questions here are:

- Can such plans successfully accommodate the Primary Program philosophy and goals developed at the district and school levels?
- Can the intent of the Kentucky Primary School Position Statement be met to allow children to advance in a developmentally appropriate way through a continuous progress model without retention or promotion issues?
- Can the program be designed to address the Critical Attributes and move children successfully toward the fourth (4th) grade outcomes?

Obviously these questions can be answered "yes" most easily in a building housing the full Primary age range, but other models can probably answer "yes" as well.

Districts may want to consider separating school groupings with overlapping age ranges. For example, School A may have 5 and 6 year olds. School B has 6, 7, and 8 year olds. School C has 7, 8, and 9 year olds. Even without overlapping age ranges, it is possible as long as the full range of developmental programming to meet each child's needs is available in the building and decisions of "when to move" a child to the next building are not tied to the child's achieving a pre-specified level of performance. That would simply be a modified version of promotion/retention. (Note - Key Issue #2 - Entering the Primary School Program also addresses the issue of "stand alone" first year programs.) Again, districts should ensure, within their planning and the "Action Plan" developed for each school's implementation process, that the organizational decisions made will meet the intent of primary school for all children.

When generating organizational possibilities, the following questions may be useful in guiding the ideas that are suggested:

- What is the projected pupil population in each year of the Program?
- How may first-year (K) children qualify for full day attendance?
- What considerations need to be made for first-year students in half-day programs?
- How many teachers are assigned to teach primary ? Are there any part-time equivarents?
- Will the morning and afternoon sessions for first year students be organized differently?
- Does the arrangement reflect the philosophy of the primary Program?
- Does the arrangement match what we value for children?
- What are teachers' preferences for age levels and groupings of children?
- Are teachers with special skills utilized appropriately?
- Are team teaching opportunities provided for those who wish to work in partnership?
- Does the arrangement complement the physical space available?
- Are continuous progress, non-gradedness and the other critical attributes facilitated through this arrangement?
- What are the unique school and community characteristics that will have an effect on the school organizational structure?
- What are the strategies that will be used to assist and support staff through the changing times?

Creating Class Assignments

The final stage in organizing for the implementation of the Primary Program involves the placement of each child into a class assignment. The placement of each child must be discussed by the teachers with the resulting placement taking into account the whole child. When focusing on creating workable social groupings of children, factors such as friendships, social dynamics, family relationships, personality, gender balance, diversity in development, unique learning needs, compatibility with the teacher, and parental requests must all be considered. The criteria for placement should be agreed upon and prioritized before the placement process beings. If a school council is in place, such considerations may be made by that group.

Multi-age groups may be assigned by "families" which means that the children may be assigned as a group to the same teacher for more than one year. Or, a "family" or "team" may be a larger group of children - several classes, assigned to a group of teachers, again with that assignment being for two or more years.

At this time, class size regulations cannot be waived unless the school councils are operating in the school. However, those schools which have already implemented their site-based decision making councils will have the flexibilty, within their financial constraints, to determine the most appropriate class size for all of their programs. In addition, the class size might even be different from classroom to classroom, based on a number of factors, i.e., range of ages served, teacher teaming strategies. NOTE: Key Issue # 3 – Inclusion of Special Needs Learners – also addresses reducing pupil-teacher ratios through collaborative and teaming strategies with "specialists" teachers.

When creating class assignments, the following questions might be considered:

- What are the criteria for placement?
- What are teacher preferences for groupings?
- Are developmentally appropriate instructional practices, multi-age/multi-ability groupings and continuous programs fostered?
- Is the class size within regulations or has a waiver been obtained?
- What is the parental involvement at this stage?
- Is the class assignment a workable social one?
- Has consideration been given to children with special needs?
- Are the class groupings and the physical design of the classroom compatible? What kinds of adjustments can there be to allow for the gouping? (Facilities personnel may be useful in helping staff look at the possibilities with a fresh eye).
- What strategies will be used to assist and support staff and students during a time of change?

Summary

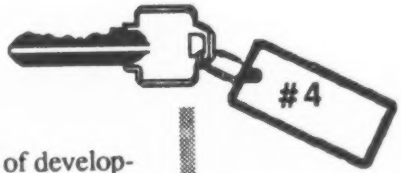
The process of decision-making regarding organization issues should be revisited each year in order that new levels of knowledge and understanding, changing beliefs, new priorities, new staff, changes in the school population, new facilities, etc. may be considered. School organization, like the Primary School Program itself, will be a dynamic process, constantly evolving over time.

Note: Sections of this resolution statement are drawn from the Primary School Resource Document, Ministry of Education, British Columbia.

Q. How will special needs learners, such as those in gifted and special education programs, be involved in primary school?

Q. Will "pull-out" programs be allowed?

INCLUSION OF SPECIAL NEEDS LEARNERS



Underlying the primary school concept is the belief that the use of developmentally appropriate educational practices, in conjunction with other critical attributes such as heterogeneous grouping, will result in continuous progress toward learning outcomes and enhanced self-concept for children with varying abilities. The Primary Program, designed to be child-centered and to recognize and value the diversity of individual learners, can successfully accommodate a wide range of learner needs. Students eligible for special services to meet unique learning needs, such as gifted education, special education, Chapter 1, basic skills remediation, and English as a second language, should, to the maximum extent possible, receive these services in the general education setting in Primary School.

To assure the successful inclusion of children with varying abilities in the primary setting, adaptations of teaching and learning strategies, pace of instruction, modifications of materials and/or equipment, and flexibility in environmental conditions and school routines may be necessary.

Special teachers and therapists as well as aides and volunteers share the responsibility with the regular education teacher for addressing individual learner needs in the general education setting. Services may range from personal care for an individual student to direct assistance with the instructional program and data collection in assessment.

As students are grouped and regrouped for various activities throughout the day, involved staff members may conduct activities such as small group instruction, demonstration of new concepts or review of those previously introduced, assistance to individual students with new concepts or use of equipment, observations of student performance, and other support functions. Because federal laws require that Chapter 1 funds supplement, but not supplant required state programs, collaboration of Chapter 1 staff within the regular classroom must adhere to these requirements. However, creative methods are available which allow inclusion but do not violate federal law.

When a special needs learner in the primary school is determined to be eligible for special education and related services under P.L. 101-476 (formerly P.L. 94-142), the special services and classroom enhancements to be provided for the child are documented on the individual education Plan (IEP) as determined by the Admissions and Release Committee.

Collaboration among all staff as they work together in planning and delivering services is essential. Creative approaches to team teaching and effective use of support personnel can substantially reduce pupil-teacher ratios as well as expand the repertoire of teaching and learning strategies and services available to all children in the primary program.

Emphasis on educating children with special needs in the context of the general education classroom does not preclude appropriate use of resource rooms, self-contained classrooms, or separate specialized services. The use of such settings should be determined on an individual child basis and should continue only as long as needed. As developmentally appropriate educational practices in multi-age/multi-ability classrooms evolve, and professional teamwork among teachers and support personnel grows, the perceived need for separate instructional settings in the Primary School will greatly diminish.

Q. What strategies could be used for obtaining planning time for teachers in Primary School?

PLANNING TIME FOR TEACHERS

Professional Teamwork is a critical attribute of the primary program, and time for teachers to plan collaboratively for the instructional program on an ongoing and regular basis will be essential to the success of the program. The role of school councils in Primary school decision-making, particularly on organizational and curriculum issues will also require extensive time. Where will the time come from?

Statutory provisions provide some direction. KRS 158.060 (1) states "...Except for handicapped children and children attending the Primary School Program who may attend a program of less than six (6) hours per day under policy adopted by the local school district board of education and approved by the State Board for Elementary and Secondary Education, a minimum of six (6) hours of actual school work shall constitute a school day. Kindergarten programs may be operated for less than six (6) hours without state board approval."...

Local policies addressing this provision could take many forms. For example, children could be released 20 minutes earlier each day (giving teachers 100 minutes per week). Teams of teachers could schedule two (2) fifty-minute planning sessions before or after school, or one (1) hour and forty minute session. Even 12 minutes per day would generate an hour of planning time.

Another format might be releasing all students a 1:00 p.m., or even an hour early, on one given day of the week. The students could be sent home, provided after-school child care programs, provided in-school programs such as assemblies with community resource people as speakers, etc., under the supervision of rotating teachers, substitutes, aides, volunteers, or some combination of the above.

Other suggestions which do not require shortening the school day include:

1. Schedule primary teams or "families" to have common planning time daily while children are having library, physical education, art or music with the specialists. The schedule should be arranged so that each specialist could meet, on a rotating basis, with the team at least once a week.

2. Provide several substitutes to rotate through teams one day a week, releasing those groups of teachers for an hour or hour and a half for planning.

3. Extend the work day for teachers. This could be paid through SEEK or other funds (possibly grant funds), or encouraged through some type of incentive program to "earn" a wonderful event or instructional material, etc., for "x" hours of volunteer planning time.

4. Try to obtain additional funds, through grants or legislation, to pay for planning time for teachers, or for supportive supervision through substitutes, aides, etc.

5. Extend the number of paid "days" for teachers, and allocate it by adding an hour each week.

Be creative! These are just suggestions. Many more options are possible. This may be an area for study and consideration for legislative action in the future.

Q. Will there be flexibility in use of state textbook dollars to purchase more developmentally appropriate materials in primary schools - manipulatives, etc.?

TEXTBOOK FUNDS

According to the 1991-92 Purchase Guidelines for textbooks, there is some flexibility in the expenditure of textbook funds for developmentally appropriate materials for the Primary Program. These Guidelines were distributed to Superintendents March 13, 1991, by Ron Moubray, Associate Superintendent of School Administration and Finance. Changes in the statutory language are being considered for the next legislative session to permit such flexibility without a special approval process.

Basically, for primary programs, the Guidelines permit purchase of "class sets" of texts, rather than one text per child, and allow for special approval for the use of programs which do not require basal texts. The Guidelines for each of the specific adoption areas are listed below.

April, 1991-92 Purchase Guidelines
Elementary Programs Grades (1-8)

LANGUAGE ARTS

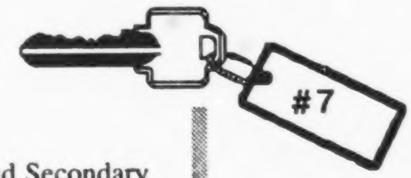
Reading	Textbooks must be adopted for grades 1 through 8. Class sets or groups of books within the class may be purchased in grades 1 through 3. Class sets must be based on the number of students in the largest class per school. Textbooks must be purchased for all students in grades 4 through 8. Students in grades 7 and 8 must have either reading or literature textbooks. There should be enough textbooks available to assure that students can use a text at their reading level. Special approval can be granted for the use of programs in grades 1 through 3 which do not require basal textbooks for all students. The textbook allocation each year must provide adequate funds for replacing consumable materials.
Language	Textbooks must be adopted and purchased for all students in grades 1 through 8. The textbook allocation each year must provide adequate funds for replacing the consumable materials in the primary grades.
Literature	Textbooks must be adopted for grades 1 through 8, but purchases are not required. Since these textbooks are primarily used as supplemental texts and the reading textbooks contain a variety of literary selections, it is not necessary for them to be purchased except in those school districts which choose to make such purchases. If reading textbooks are not purchased for grades 7 and 8, then literature textbooks must be.

Spelling	Textbooks must be adopted for grades 1 through 8, with purchases required for grades 2 through 6. First, seventh and eighth grade students may have their spelling instruction integrated into the language arts program and therefore not need a separate textbook. Those school districts which wish to purchase spelling textbooks for grades 1, 7, and 8 would be permitted to do so.
Handwriting	Textbooks must be adopted for grades 1 through 8, with purchases required for grades 1 through 3. The textbook allocation each year must provide adequate funds for replacing the consumable materials in these grades. Any district which wishes to purchase handwriting texts for additional grades would be permitted to do so.
Mathematics	Textbooks must be adopted for grades 1 through 8. Class sets or groups of books within the class must be purchased in grades 1 through 3. Class sets must be based on the number of students in the largest class per school. Textbooks must be purchased for all students in grades 4 through 8. Special approval can be granted for the use of programs (e.g., Mathematics Their Way, Explorations) in grades 1 through 3 which do not require basal textbooks for all students. The textbook allocation each year must provide adequate funds for replacing consumable materials.
Science	Textbooks must be adopted for grades 1 through 8. Class sets or groups of books may be purchased in grades 1 and 2. Textbooks must be purchased for all students in grades 3 through 8. Special approval can be granted for the use of programs (e.g., SCIS, ESS) which do not require basal textbooks for all students.
Social Studies	Textbooks must be adopted for grades 1 through 8. Class sets for groups of books may be purchased in grades 1 and 2. Textbooks must be purchased for all students in grades 3 through 8. The textbooks must address the sequence of social studies content as stated in the Program of Studies for Kentucky Schools: Grades K-12.
Art	Purchase as needed.
Music and Health	Textbooks must be adopted and purchased for grades 1 through 8, but purchases are required in sets only. The number of books needed in each set should be based on the number of students enrolled in the largest class per school.

PLEASE NOTE: ALL REQUESTS FOR SPECIAL APPROVAL MUST BE SIGNED BY THE SUPERINTENDENT.

Q. When will the regulations be developed establishing the procedures for an ungraded primary?

REGULATION DEVELOPMENT



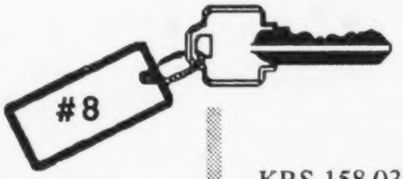
KRS 156.160 (1) states: "The State Board for Elementary and Secondary Education shall adopt administrative regulations establishing standards which school districts shall meet in student, program, service, and operational performance. These regulations shall comply with the expected outcomes for students and schools set forth in KRS 158.6451. (Note: Goals, outcomes in measurable terms, curriculum framework).

Administrative regulations shall be adopted for the following: (a) courses of study for the different grades and kinds of common schools, including procedures for developing an ungraded primary program which shall be implemented by the beginning of the 1992-93 school year."

It is anticipated at this time that these regulations will be developed during the summer of 1991. This Program Advisory and Program Description for Primary School are intended to help shape the "standards for student, program, service and operational performance" for Primary School which will eventually be in regulation form, though more like "guidelines" than typical highly proscriptive regulations.

The second part of this regulation, section (a), deals with a specific part of the "program" standard. Interestingly, this is the only place in the statute where the Primary Progam is prefaced by the adjective "ungraded", and it is used in the context of "courses of study". This is consistent with the interpretation provided by Dr. Jack Foster, Secretary of Education and the Humanities, and LRC staff, that the descriptor "ungraded" was intended to apply to curriculum and assessment considerations which "delinked" program expectations for primary students in terms of instructional content and student performance to the number of years they have been in school. The curriculum is designed for Primary (K-3), the performance-based assessment is at fourth grade level, the continuous assessment program will gauge how well children are progressing toward the fourth grade outcomes, and so on. In other words, it is the ungraded curriculum and assessment which is the driving piece for an ungraded organizational structure in Primary School, not the other way around.

Q. When will the criteria for successful completion of primary school be established? Will there be guidelines for decision-making relative to children who are gifted or have disabilities?



COMPLETING THE PRIMARY SCHOOL

KRS 158.030 (2) specifies "...successful completion of the primary school program shall be a prerequisite for a child's entrance into fourth grade. The State Board for Elementary and Secondary Education shall establish, by regulation, methods of verifying successful completion of the primary school program pursuant to the goals of education as described in KRS 158.6451."

The criteria and methods for verifying successful completion of Primary School will not be developed in the form of regulation until the work of the Council on School Performance Standards is complete and the outcomes expected of students at the fourth grade level are determined. This should be some time during the fall of 1991.

However, it is appropriate to state at this time that the criteria for evaluating when a child should enter the fourth grade will need to be an individual decision which looks at the "whole" child -- and considers criteria relative to social, emotional and physical development as well as academic attainment.

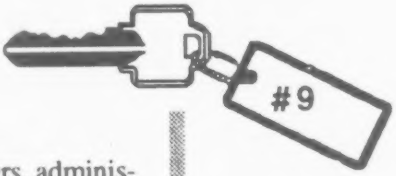
Most children will successfully meet criteria with a four-year primary school experience. Some children, particularly those "at risk" due to a disability or economic deprivation for example, will need one or two years of preschool experience, extended school services, and possibly services through the family resource center, to meet that goal in four or five years. A few children may need six years, for example, a child with a cognitive disability who started primary school without a pre-school experience. A few gifted students may meet criteria for completion in three years. Caution is given, however, to placing too much emphasis on just academic achievement. Those needs can be met in a developmentally appropriate primary class and the gifted child should be challenged academically in the program. Probably of more "importance" for this child is their social, emotional,and physical readiness for fourth grade.

Although the criteria for successful completion of primary school will be determined by state regulation, the decision-making process to determine "when" an individual child should move should be a local policy decision. For example, a district may develop a policy that every child will be in primary school for at least four years, and no more than six years, perhaps with a special process to consider exceptions. In that district, that will be one of the criteria for completion.

For students with disabilities in the primary school, the Admissions and Release Committee should be involved in the determination of completion of Primary School, with consideration given to age-appropriateness.

Q. How will the Department of Education address the massive need for teacher training at the inservice and preservice levels?

TEACHER TRAINING



Plans are being finalized for the training opportunities for teachers, administrators and parents related to Primary School. Training will shift from awareness level to skill development and practical strategies beginning with the second series of Primary School Institutes in June of 1991.

In April, local school districts were mailed a catalog of all the inservice training offered through the Department addressing the required areas of training by KERA, including Primary School. In the Technical Assistance section of this Program Description, a draft plan of the Primary School training opportunities is presented.

A meeting with representatives of the Colleges and Universities was held to discuss strategies for preservice and inservice training for Primary educators.

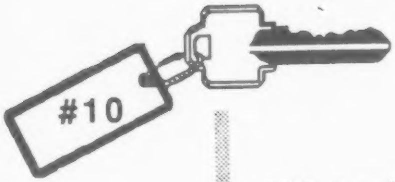
Some school districts are utilizing new staff development dollars under KERA to expand the number of inservice days during 1991-92 for Primary teachers beyond the mandated four days in order to more adequately address the training needs.

The Department will be working with the staff of the Professional Standards Board to integrate preservice and inservice expectations for primary educators.

KRS 156.095(4)(d) mandates that professional development in 1990-91 and 1991-92 will be offered in the area of "Nongraded primary programs".

Q. Can I assign an experienced teacher with a 1-8 certificate to an ungraded primary classroom that contains kindergarten-level pupils?

Q. Can I assign an experienced teacher with a kindergarten-only certificate to an ungraded primary classroom that contains pupils in the age ranges of first, second and/or third grade?



TEACHER CERTIFICATION

Interim Primary Policy

This interim policy has been approved by the Education Professional Standards Board for 1-8 and K-only certified teachers who are assigned to teach in KERA primary classrooms. All teachers so assigned should be encouraged to undertake the district training described in the interim policy; however, those with 1-8 or K-only must undertake the training.

Following a district's implementation of the training plan and follow-up, successful teachers will have "Approved for KERA Primary" added to their 1-8 or K-only certificates.

1. District Plan. Each local district assigning 1-8 and/or K-only teachers to ungraded primary classrooms shall submit a district plan for 24 hours of training prior to and during the first year of teaching in the KERA primary, provide additional assistance during that year, and complete performance evaluations of these teachers. The plan will be on a format prepared through the Kentucky Department of Education (KDE) using guidelines prepared by the Matrix Team. Plans will be approved on a year-by-year basis.

2. Training. The district plan shall show how the primary teachers will be prepared in each area of the critical attributes, and a part of the plan shall be to utilize the 12-hour training package prepared through the Division of Curriculum and Staff Development. The subcommittee recommends that this training package incorporate KET, current exemplary videotapes and other resources of quality that are available and ready for use.

3. Support. The district plan shall indicate how the district will provide support and mentoring during the first year in a KERA primary classroom (for example, visits to exemplary programs; resource information; discussion and cohort groups; team teaching, demonstrations; visits and critiques from experienced primary teachers; and other assistance that teachers might need).

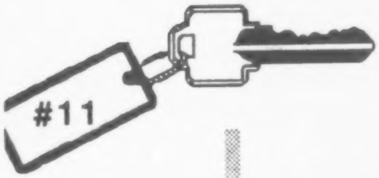
4. Performance Evaluation. The district plan shall describe the performance evaluations that will be carried out during the teachers' first year in KERA primary classroom. These evaluations shall be directly related to the critical attributes, and shall be linked to assistance for and professional development of the teacher. The district plan shall also describe assistance that will be available for teachers who require additional help in areas of the critical attributes.

5. Identification of Teachers. The district plan shall list the names and social security numbers of 1-8 and K-Only teachers who will be assigned to KERA primary classrooms during the first year of implementation. Certificates will be checked for recency and validity through DTEC. KDE Primary School Staff shall approve district training for those teachers holding current and valid K-only and 1-8 certificates, who will be approved under this interim policy for teaching in KERA primary classroom.

6. Final Report. The district plan shall provide for a final district report summarizing the effectiveness of the training program and the district's support of teachers during their first year in a KERA primary classroom. The district shall confirm the list of teachers approved for the training who completed the training and who successfully taught in a KERA primary classroom for a year. These teachers will have the "approval" statement added to their certificates.

Information and proposal packets will be available through the Kentucky Department of Education.

Q. Will K-4 interns be assessed fairly by observers using the Kentucky-Teacher Internship Program Classroom Observation Instrument if the interns are providing developmentally appropriate activities (rather than direct instruction) to pupils in primary school classrooms?



KENTUCKY INTERNSHIP TRAINING PROGRAM

Potential Conflicts between Primary School Effective Teaching Practices and the Direct Instruction Model in KTIP

Many principals and some university personnel who work with teacher-training programs have expressed concerns about potential conflicts between primary school effective teacher practices and the Direct Instruction Model in the Kentucky Teacher Internship Program (KTIP).

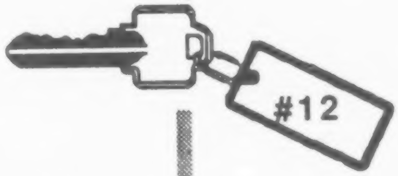
The potential for discrepancies is being addressed by a subcommittee of the Advisory Committee on the Teacher Internship Program (ACTIP). The subcommittee has already examined the Classroom Observation Instrument (COI) and has determined that there is nothing in the instrument itself that forces the observer to grade on the basis of a direct instruction model.

The subcommittee has concluded that the training of observers is the critical element in ensuring that members of beginning teacher committees make effective use of the COI when they work with interns in primary classrooms using developmentally appropriate practices (and possibly later, in early childhood settings, if the Education Professional Standards Board establishes pre-kindergarten certification for teachers).

To this end, the subcommittee is simultaneously looking at (1) expanding the KTIP knowledge base to include research on effective practices in early childhood preschool and primary-level classrooms, and (2) modifications in the training of observers' use of the COI. Modifications of training will include developing training and criterion tapes that focus on exemplary primary classrooms.

Q. What will the Department be developing for public awareness and parent information about Primary School?

PUBLIC AWARENESS/ PARENT INFORMATION



Brochures have been developed for parents about Primary School. These were disseminated at the State Fair in August of 1990, and a master for reprinting is available to local school districts from the Office of Community Services. Plans are being considered to develop a parent calendar focusing on developmentally appropriate practices in Primary School to be available at the 1991 State Fair. A number of presentations have been made to PTA and other parent groups at the statewide, regional and district levels.

Staff from the Department met with Kentucky School Public Relations Association to brainstorm approaches schools and communities can use to gain parent and community support for the Primary School Program. It is anticipated that a packet of materials, ideas, sample press releases, etc. to be "customized" for local use will be disseminated to school districts during the summer of 1991.

The Department will be receiving assistance from the Business Roundtable represented by Humana, UPS, and Ashland Oil in the area of Public Awareness of all the KERA initiatives. Primary School will be a major focus.

Local districts are encouraged to involve parents, right along with teachers, administrators and Board members, in exploring what Primary Schools are all about and in establishing direction and decision-making at the building level about Primary School implementation strategies.

TECHNICAL ASSISTANCE

"To know and not to do is not yet to know."

Zen saying.

HELPING IT TO HAPPEN: HOW TO GET STARTED

General Plan:

1. Help the entire school community to acquire a working understanding of primary school.
2. Seek to develop group consensus on basic principles and values to which they subscribe (See "We Agree," below) which should be reflected in a written philosophy statement.
3. Organize the school, under direction of the principal and a steering committee, (or the school council if one has been formed) into ad hoc committees/task forces to accomplish various jobs that need to be done.
4. Agree by Spring of 1992 upon an Action Plan (with target dates) to help it all to happen.

Specific Actions:

I. **Explore! Explore!** Share with your colleagues, at the school, all notes, materials, handouts readings, impressions, site visits to other schools, etc., and engage in lively discussions, so that everyone in the school will have had equal opportunity to be "tuned in". Include parent representatives if possible.

II. Create an "Awareness Task Force" to be responsible for the above-mentioned sharing, and then to be responsible for taking inventory of understandings and beliefs (involving the total school staff and parents). Resources that may be used include:

   A. "Inventory of Educational Beliefs and Ideas" (Anderson, Pavan, Schwartz, 1990 version, 77 items). Permission is granted to use this instrument for this specific purpose. (Available from Kentucky Department of Education.)

   B. "Basic Principles of Nongradedness" (Pavan, revised 1990). Again, permission is granted to use for this specific purpose. (Available from Kentucky Department of Education.)

   C. The Teacher's Ongoing Role in Creating A Developmentally Appropriate Early Childhood Program (Self Study Guide developed by Connecticut). (Available from Kentucky Department of Education.)

   D. Articles, tapes, and other materials available as identified in the Resources Section of this Document.

   E. Kentucky Primary Teacher Self-Study Guide. (Available Fall 1991 from Kentucky Department of Education.)

This activity should be followed by the generation of a "We Agree" statement, which can serve as a concensus platform for future action.Make sure that there is genuine staff commitment to the platform. False loyalty can kill or weaken the action plan. A written philosophy statement should be developed and posted.

III. The Orientation Period (from now until June of 1992). Set up at least six task forces, responsible for the following functions:

- A. Making the transition: organizational planning.
  1. Teaming ventures; teachers learning how to become colleagues/collaborators/partners.
  2. Alternative mechanisms for pupil grouping and pupil movement.
  3. Dealing with logistics: scheduling, space use, etc.
- B. Collecting and developing operational resources.
  1. Assessment tools and procedures (diagnosis emphasis).
  2. Pupil progress - reporting procedure and practices (emphasis upon identifying progress and growth; pupil-success orientation).
  3. Portfolio development (plans for).
  4. Inventory of instructional resources (including technology).
- C. The school-home partnership: parent involvement in the educational process (at home; at school).
- D. Curriculum review/revision/updating.
  1. Definition of long-range curriculum outcomes.
  2. "Boiling down" the curriculum to manageable size ("less is best").
  3. Reconsidering sequences; emphasizing integration.
  4. Emphasis on problem-solving, exploration, and higher-order thinking.
  5. Developing at least a few "units' to be launched in 1992-1993 with multi-aged groups and on an interdisciplinary basis.
- E. Revitalizing teaching and learning (basic concepts: the teachers as facilitator; the child as an active, enthusiastic explorer).
  1. Promoting cooperative learning (pupil-pupil interaction).
  2. Promoting peer tutoring and mentoring among children.
  3. Helping pupil groups to thrive: ways and means of working productively together.
  4. Pupil involvement in program planning/decision.
  5. Replacing competitive (A-B-C-D-F) reward/motivation practices; outlawing invidious comparisons.
- F. Visit resource schools and pilot delivery site schools to be established for 1991-92.
- G. Action Plan: Gathering information from task forces (A) - (E) to develop an Action Plan to address the critical attributes of Primary School. This must be submitted to the Department of Education in the Spring of 1992 and fully implemented no later than the 1995-96 school year.

IV. Implementation of the Action Plan. Create a Task Force for the "Launch" in 1992-93.

- A. During 1991-92, using reports and products from the above-mentioned task forces, set up:
  1. Operational definitions (e.g., in handbooks).

   2. Parent and Community Information Program (e.g., PTA meetings, news stories, service club presentations, publications).
   3. Pupil Information Program (explain what the new arrangements, vocabulary, etc., will be next year and thereafter).
   4. Times/Events during 1991-92 to review progress, celebrate progress being made, recognize and reward productive individuals/groups.

B. During 1992-93

   1. Sponsor "inauguration" activities.
   2. Assist staff with "troubleshooting" as needed.
   3. Sponsor "success and celebration" activities, not only within the school but within the community. Maintain public awareness of the reasons for, and the efficacy of, the new program.
   4. Re-examine the Action Plan - make modifications as needed.

V. Optional: Encourage the formation of a Task Force to study the possibility of launching a similar ungraded program at the upper elementary or intermediate level, possibly by 1993-94 when the first "alumni" of the Primary will be ready to move up.

Modified from Planning for the Nongraded School, by Robert H. Anderson and Barbara Nelson Pavan. Phi Delta Kappa/EKU College of Education, February 7-8, 1991.

DEVELOPING AND REFINING AN EDUCATIONAL PHILOSOPHY

The first task and first challenge of principals, teachers and parents is to develop, modify or refine their philosophy about the education of children within the context of Primary Schools.

Developing a philosophy will serve as the basis for program planning and implementation. It will reflect the school's beliefs, values and priorities. The following questions and points to consider are intended to serve as stimuli for group discussions.

1. *What do you believe about how children learn?*

   Primary students are active learners; they need hands-on exploration and freedom to move and interact with peers and adults in conversation and shared tasks; they need a balance of "work" and "play"; they learn from each other; they vary widely in level and rate of development in different areas.

2. *What do you believe about motivation and what prompts children to learn?*

   Elementary children have intrinsic motivation to comprehend their world; to have an effect on it and be able to function competently in it. Intrinsic motivation varies with individuals and changes in form over time; children respond positively to extrinsic rewards also. What rewards are important: praise, recognition, personal satisfaction, material or symbolic compensation? What role do sanctions play and why? Who has what part of the responsibility in the teaching/learning process?

3. *What do you believe children need to learn?*

   Children need a rich, varied environment of objects, situations, people, backgrounds, experiences and skills with which and with whom to interact. What is the role of the school in each of these areas?

4. *Who do you believe has the responsiblitiy and right to be involved in the development and education of young children?*

   Parents have a legal and moral responsibility for their children's welfare and development; schools have a legal and moral responsibility to provide an educational environment to all children. What are the rights and responsibilities of different adults: parents, community people, teachers, principals?

5. *What do you believe is important about the nature and events within the social, physical and time environment?*

   Elementary students need to be able to move, to interact with the environment and with others. How should time be distributed and used? What are the spatial limits of the learning environment? (classrooms, playground, outdoor classroom, parks, businesses, community services) How will opportunities for students to interact be provided?

Modified from Tennessee Plan for Nongraded
Elementary Education

A Testimonial to Primary School

The following pages were sent to the Department by two teachers, John Tapper and Judy Coven, in the Kurn-Hattin Primary School Project in Westminster, Vermont. This project involves two teachers, fifty children ranging in age from 5 to 11, and collaborative support from several learning specialist teachers.

A summary is provided of what they did, and their perspective on how well it worked. We felt it should be shared. A 30-minute video tape of their program, narrated by a child in the program, accompanied the letter. We are in the process of obtaining permission to make the tape available to schools in Kentucky.

March 1, 1991
Cambridge, Vermont

Ms. Linda Hargan
Assistant Superintendent
Dept. of Education
Capital Plaza Tower
500 Mero
Frankfort, Kentucky 40601

Dear Ms. Hargan:

Enclosed please find material pertaining to the Primary Program, and its teachers, John Tapper and Judy Coven. We have included the video you requested, as well as an assortment of newspaper articles and letters of evaluation. Also included is our first year report to the school board on the progress of the program.

I hope that you will find the information interesting enough to use our services. Judy and I love talking to teachers about multi-age schooling. We believe firmly in the way we work with children and I am convinced that we have something to offer schools in Kentucky. Vermont has a long tradition of small rural schools and quality education. I look forward to the opportunity to share that tradition with your schools.

Professionally,

John R. Tapper

John R. Tapper
Community Learning Resource
P.O. Box 14
Cambridgeport, Vermont 05141

PRIMARY PROGRAM

One Year Self-Evaluation

When the Primary Program was established, the board instructed the staff to return at the end of the first year to report on the status of the program. This report is a self evaluation of the program by the staff.

THEMES

The following thematic units have been studied during this first year:

Ourselves/Our Families
Native Americans
Rhythm and Rhyme
Towns
Blood and Guts
Japan

Our typical daily schedule included:

Morning

- Class meeting
- Family time (literacy activities in mixed age groups)
- Math time (math, science, and shared language activities in age homogeneous groupings - younger and older)

Lunch and Recess

Afternoon

- Writing time (half an hour of all-school writing)
- Theme time (integrated, thematic activities incorporating science, art, social studies, math, and language arts)

JOBS PROGRAMS

Snack Program

The six-year-olds prepared a snack for the class.

Post Office

The seven-year-olds ran a district-wide postal service.

School Store

The eight-year-olds sold bonds, ran a store, and created many of the best selling items.

A Testimonial to Primary School (Cont.)

Publishing Company

The nine and ten-year-olds created and ran The Flapping Press which successfully published numerous student-written volumes.

SPECIALS

Physical Education

To accommodate a variety of physical differences the children participated in P.E. in their math groups (younger - older).

Music

The class received one "whole school" music period and one age appropriate music period each week. The whole group performed in both of this year's concerts together.

Art

After trying both family-style and age appropriate groupings, we settled on using family groups for formal art lessons.

Library

Library occurred in age appropriate groups. Liz has been involved in several special projects including work on specific authors and a book writing/illustrating/binding project.

Special Needs (see attached for special needs reports)

We felt the Primary Program was successful in meeting the needs of special needs students. Family groupings during reading and writing activities seemed to take a lot of pressure off of students who, because of their learning difficulties, felt they were not able to keep up. The variety of styles and levels allowed each child to achieve their potential. In all but one instance special needs students showed strong gains in literacy despite significant previous difficulty. Several special needs children also showed significant, testable gains in other areas.

Because of feeling that they belonged, many students showed strong growth of self-esteem. Several children who began the year as "non-participators" have become more active in group discussions, even when all 43 children are involved.

Enrichment

Along with providing for students with learning difficulties the Primary Program was concerned with offering opportunity to children who are gifted. Again, family groupings proved valuable in allowing students to work at a level that was suited to their ability. Theme time offered the opportunity for children to explore topics through open-ended activities that allowed those with interest and expertise to go as far as possible with a concept. For the oldest children, enrichment was provided through special topics in mathematics and individual projects.

A Testimonial to Primary School (Cont.)

Self-evaluation

We feel that the Primary Program has had an extraordinarily successful first year. Overwhelmingly, parents tell us that their children are happy and enjoy going to school. Many comment on how appropriate this setting is for their children. They cite the relaxed learning atmosphere and the amount of learning their children are doing this year as positive aspects of the program. As stated above, many students have shown unusually strong academic, social, and emotional growth.

There is a strong sense of community at the Primary Program. This is not to suggest that all children get along with each other all of the time or that there is never struggle within the community. However, we can say that at some time or another all of the children have expressed their opinions, contributed to a whole school discussion, or shared a story or special item with the whole school community. Visitors are usually impressed with the degree of interaction and attention students give each other and each other's ideas.

The Primary Program has welcomed numerous visitors this year. Educators from around the state and as far south as Delaware are interested in this new model of primary education and have come to see first hand how it works. We have been visited by several prospective practice teachers. (This spring five students approached us about student teaching here.) There is a good deal of interest in the academic enthusiasm and accomplishment of students in the Primary Program.

A Testimonial to Primary School (Cont.)

WINDHAM NORTHEAST SUPERVISORY UNION
Speech & Language Department

May 7, 1990

Dear Judy and John,

It's hard to believe it's already May and that the school year is drawing to a close. But, before it does, we want to literally "put in writing our appreciation for the educational environment you have created in your Primary Program. It has been a particular joy to watch our IEP kids flourish! Very often school is a frustrating place for these kids with normal intelligence, but with communication deficits and/or learning disabilities. Not so in your program! The manner in which you exercise your philosophy accommodates the individualized learning styles our children manifest and allows them to grow as students and as members of a community. We've included some examples of the facets we see as particularly beneficial:

1. The multiage structure, with its inherent continuum of abilities, minimizes the importance of chronological age and allows all children, including ours, to fit in academically and socially.
2. The use of manipulative and multisensory approaches capitalizes on everyone's abilities and affords opportunities to excel. Not only does this stimulate intellectual growth, it also builds the self esteem they need to be independent learners and contributing members of society.
3. Your carefully integrated themes benefit all the children in the development of concepts, but they are truly invaluable for the language learning disabled children. Also, by incorporating theme related field trips into your curriculum you ensure that these children use real world experiences to absorb information which would otherwise be too abstract to be useful. They can then form this information into integrated wholes which can be compared, contrasted and stored in their memories to build on in the future.

Lest you think we find only the smaller grouping beneficial, we also want to compliment you on the growth we have observed when the large, multiage group convenes. It is amazing how the children have improved in their abilities to follow directions, to problem solve, to demonstrate a sense of caring about each other and to look beyond their own needs toward the good of the group. These are life skills which are bound to stand them in good stead as they mature.

There are definite standards in you program and we have been impressed by how you have been able to help our kids rise to meet the challenge, yet not be overwhelmed. For the children with language deficits you have been able to reduce the quantity of work without impinging on the quality that each child is capable of producing. You've been willing to recognize the need to reinforce effort and improvement and not wait until "perfection" was achieved. You've even been able to make homework a learning experience which builds responsibility, organization, and independence.

You've taken on an heroic task this year and we want you to know we think you've done it spectacularly. As we said initially, our primary focus is the language disabled children we serve - and for them, the year has been magical. But we also see the gains of the other children as noteworthy. Perhaps one of our most heartwarming observations is that our kids fit in so well that it's virtually impossible to pick them out of the crowd.

Gratefully,

/s/Toni Stevens
Speech-Language Assistant

/s/Kathleen H. Pirruccello
Speech-Language Pathologist

A Testimonial to Primary School (Cont.)

May 8, 1990

The Primary Program has seven special education students and two more in the evaluation process making this a total of nine students receiving some services from the resource staff. Five of the seven students are receiving direct daily resource services in addition to support services from the resource staff during classroom time. The other two students are on a monitoring model, receiving services as they need it.

It was felt by the staff that making these students feel successful while functioning in a classroom of peers would be more beneficial than removing them from the classroom setting on a regular basis.

This hypothesis has proven true. All seven students have improved their self confidence and self esteem. They share their interests and areas of expertise with their fellow classmates and are viewed as valuable members of the large family group.

Academically, all these students have demonstrated improvement in their personal areas of academic weakness. At the same time they have gained additional knowledge in the other academic and personal interest areas.

Without any reservations I support the Primary Program for all children, special needs included. Through the process of learning these students have gained more than academic knowledge; they have acquired the skill of cooperative learning and a sense of family.

Ruth I. Dextraze
Resource Teacher

A Testimonial to Primary School (Cont.)

Teachers Get Their Chance to Focus on the Individual

by PHEBE MACE

Southern Vermont Bureau

WESTMINSTER – Give two creative teachers a new space for their classes, and they will come up with some innovative teaching.

When John R. Tapper and Judy G. Coven, teachers at the Westminster Center School, discovered they were to teach in two rented rooms at Kurn Hattin Homes, also in Westminster, they began to think of how they could teach several classes at the same time.

"We're going to try a more holistic approach to meet the children's individual needs," Tapper said.

Grades one through three, and possibly four, will hold classes at Kurn Hattin this fall. Kurn Hattin is a home for children from troubled family situations.

Westminster Center School has run out of space, despite an addition about 13 years ago. Another wing was planned for 1987, but voters approved only a modified version which later proved insufficient.

At the same time, Kurn Hattin built a new classroom building, freeing up its old building.

Tapper and Coven plan a team teaching approach, focusing on flexible groupings and scheduling, cooperative learning, individual work, peer tutoring, and a "natural" learning environment where younger students learn from older ones, and all learn a sense of responsibility toward the group.

A thematic curriculum emphasizes an integrated approach to thinking and learning, according to the prospectus.

It all began when there was some concern about who would go to Kurn Hattin, said Tapper, who currently teaches third and fourth grades.

"We decided it was a good place to house the project we proposed,:" said Tapper, 29, who holds a bachelor's degree in education from the University of Maine in Orono, and has been teaching for five years.

"People thought it would be isolated and were not enthusiastic," said Coven, 43, who teaches kindergarten. "They weren't sure whether the space was desirable. Teachers were nervous about who would go there."

Tapper, however, began loo[illegible] at the move as an opportunity.

"He thought about trying something different that both of us believed in but never found an opportunity to try," said Coven, who has a master's in education from New York City's Bankstreet College of Education.

Together, the duo has experience teaching grades one through four. Coven, who has been teaching for 19 years, 10 of them in Westminster, has taught first and second grades, and Tapper has taught the first four.

According to Tapper, the space was "suitable, unusual, wonderful" – ideal for the individualized program.

The space consists of significantly more area than the old classrooms, with Kurn Hattin's large and smaller music rooms, and an office that unites them. It also includes a large storage closet, and nine small practice rooms, ideal for two children to work together on their own, said Tapper.

Coven described the space as lending itself to "a lot of flexible groupings. The bigger room can hold about 40 children, while the smaller one can hold smaller groups."

Groupings will be organized based on the children's ability, developmental levels, or interests depending on the project or skill that needs to be addressed," said Coven.

Children will be encouraged to feel great about themselves, accept each other and their differences, learn and appreciate each other, she said.

"At a summer camp I worked at for ages 7 to 12, there was no pressure on the kids to perform on any given level," he said. "It was very natural situation. There was co competitiveness, they were not grouped by skill."

Multi-Grade Venture Appears Successful

by JAMES PENTLAND

WESTMINSTER – A bold experiment in primary education, Westminster's Kurn Hattin program is now almost halfway through its first year, and the multi-grade, team-teaching venture has already established a clear identity for itself.

The program is the brainchild of Westminster teacher John Tapper, who saw an opportunity in the school's need to rent space at Kurn Hattin. His idea was to take children from the first through fourth grades and bring them together in an ungraded setting under the supervision of two teachers. He enlisted the cooperation of Westminster kindergarten teacher Judy Coven, and together they are in the process of creating a program that may inspire far-reaching changes in the nature of education, they said.

"Part of the program's success comes from the fact that it is small and has thus been able to establish its own identity," Coven said. She added that the program has enjoyed tremendous support from parents who have volunteered their time and energy.

The ideas behind the program are not entirely new – many people will remember the old one-room schoolhouses – but in this day, it is unusual to find such a wide span of ages in one class, Coven said. The program makes use of two rooms, one large enough for all the students. The team-teaching concept allows for flexibility in groupings, such as age, and has the added benefit of offering two teaching styles, combining different strengths.

In theory, the older children help to coach the younger ones, and there are many instances where this works well. For example, for the native American Indian project the children created before Christmas, the older children did the research and acted as group leaders.

However, regardless of the theory, an observer gains the impression that age does not matter in this situation. Each student is allowed to perform at his or her own level, and there are no "grade-normal" expectations.

During group meetings, issues are discussed and all ages participate. Everybody listens. In choice time, when children choose an activity, and at snack and lunch time, interaction between the ages is common.

Those involved with the program said they think there is a corresponding emphasis in this program on the child as an individual. There is no standard that children must aspire to with such a diverse grouping, and consequently, the children may tend to feel more accepted wherever they are in terms of skills and academic proficiency.

In part, the program is designed to meet the needs of children who do not fit easily into the standard graded structure.

"We certainly do not have less than our fair share of students who do not fit into grade norms," Tapper said.

The other important difference between this program and the regular graded structure involved the curriculum.

"There is no prepared curriculum," Tapper said. "No math books, no science books, no social studies books. It's a process-oriented, hands-on approach."

For example, when exploring the properties of sound for science class, the students built their own rudimentary instruments and discovered for themselves the effects of their experiments.

The program's approach to mathematics is concrete rather than abstract, the teachers said. The younger set works on numbers using materials – patterns of paper shapes based on pattern blocks, playing cards, and other tools – in order to learn the varying components of singe-digit numbers. The older group, deals with money problems, again using blocks to help grain the mind toward abstract thinking, or uses the computer to assist with business and advertising problems, a nod in the direction of social studies. This is one of the few times the class is divided by age.

Workbooks are used to provide problems, and the times tables must still be learned.

Social studies allows for more innovative approaches. The American Indian project was created by 10 different groups of four or five children, with each concentrating on a particular tribe. Each group researched and built a representative model of their tribe's habitat, wrote stories about their lives as tribe members, and painted pictures to supplement the effect.

City project

Another project involved cities. Following lengthy discussions concerning what cities need, and several visits to factories and municipal buildings, the students prepared to build their own small cities. These will be relatively complex working models, including wiring for electricity.

This kind of activity highlights an important aspect of the curriculum – its integrated nature. Such a project combines science and social studies, as well as practical model-making skills. As the barriers are broken down between the various grade levels, so are they broken down between the different areas of study,the teachers said.

Another important aspect of the venture is the work program. This has taken a little time to get established, but each age group will eventually have its own line of work, Coven said. Currently, the older children run the publishing company, Clapping Press Inc., which publishes manuscripts and student autobiographies. The younger children run a once-a-week snack program.

The 7-year-olds are preparing to open the Westminster Schools Post Office. They have made envelopes, designed stamps, and built booths. The 8-year olds are almost ready to open the school store, having completed their comparison shopping and decided on prices.

For the future, Coven said she believes that the children are ready developmentally for new challenges and a different structure after the fourth-grade level, and she said she believed that they will be ready academically, also.

Brattleboro Reformer
Saturday, January 20, 1990

SOURCES OF INFORMATION

Available in your school or Central Office:

- Articles distributed through Regional Meetings during Spring and Summer 1990
- Primary School Institute handout materials
- Video/Audio tapes of the Primary School Institute sessions which teams may have purchased
- Secondary Vocational Education teachers and members of the vocational student organizations may provide assistance to primary teachers and students by assisting with:
  1. Food for America programs
  2. Health and fitness programs
  3. Drug and abuse prevention projects
  4. Nutrition projects
  5. Mobile technology centers that have basic tools, materials and learning kits that support the curriculum
  6. Child safety programs
  7. Learning centers
  8. Storytime and other small group activities
  9. Food preparation activities
  10. Touch keyboarding activities
  11. Computer applications (Operations, data base, word processing)
  12. Career awareness projects

  For further information, contact:
  The Office of Secondary Vocational Education
  Kentucky Department of Education
  Phone: 502/564-3472

Available through districts participating in the Primary School Staff Development Project (List of participating districts in Staff Development Section):

- British Columbia Primary Program video and print documents
- Minnesota Model Learner Outcomes for Early Childhood Education
- Connecticut's Self-Study Guide - The Teacher's Ongoing Role in Creating a Developmentally Appropriate Early Childhood Program

Documents developed by the National Association for the Education of Young Children (NAEYC):

#224 Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8. Cost: $5.00

Brochures:
#578 Appropriate Education in the Primary Grades
#582 Testing of Young Children: Concerns and Cautions. Cost: $10.00 per 100 of same title.

Consult the NAEYC catalog for additional materials.

Address: NAEYC
1834 Connecticut Avenue, N.W.
Washington, D.C. 20009-5786
1-800-424-2460 (or) 202-232-8777

Document developed by the National Association of Elementary School Principals (NAESP):

Early Childhood Education and the Elementary School Principal. Standards for Quality Programs for Young Children. Cost: $14.95 - members; $17.95 - nonmembers; $2.50 - shipping and handling charges

Address: NAESP
1615 Duke Street
Alexandria, Virginia 22313

Available through KEA UniServ Offices:

Members may request information from ERIC searches in the "Ungraded Primary File". Contact your local office for specific details.

Available through the Department of Education upon request by Districts:

- Articles distributed through Regional Meetings
- Primary Institute handouts (limited supply)
- Video/audio tapes of Primary School Institute sessions (Districts must provide blank tapes)
  Keynote Address: Dr. Robert Anderson
    Strand I - Getting Started
    Strand II - Organizational Issues
    Strand III - Curriculum (Content and Process)
    Strand IV - Instruction
    Strand V - Managing Instruction
    Strand VI - Teacher Training Issues
    (Keynote is approximately 1 hour; Strands are approximately 2 hours)
- British Columbia video tapes (Districts provide 2 blank tapes)

Information requests may be directed to:

Kentucky Department of Education
Primary School Branch
Division of Early Childhood
Office of Learning Programs Development

Primary School Resources (Cont.)

Kentucky Department of Education
Primary School
Request for Information

Name: ______________________________ Phone: __________
Address: ______________________________________
____

School or Affiliation: ______________________________

Resource titles have been collected and sorted by the descriptors below. Mark areas of interest below.

____ Developmentally Appropriate Curriculum (DAC)
____ Learning Centers
____ Integrated Curriculum
____ Whole Language
____ Family Grouping
____ Continuous Progress
____ Special Needs
____ Reporting
____ Community Support
____ Team Teaching
____ Cognitive Development
____ Social/Emotional Development
____ Gardener's Theory (Seven Areas of Intelligence)
____ Flow

____ Staff Evaluation
____ Model Schools
____ Thematic Units
____ Cooperative Learning
____ Multi-age Grouping
____ Authentic Assessment
____ Peer Coaching
____ Gifted Education
____ Parent Involvement
____ Collaboration
____ Aesthetic Development
____ At Risk
____ Research
____ Program Evaluation
____ Getting Started
____ Resource Schools

You may select the specific type of resource if you have a preference. Or, you may select a specific type as your descriptor; i.e., You may want a list of video tapes on any subject – just mark video tapes; or, you may only want articles on team teaching – then mark team teaching and articles. You may mark more than one descriptor depending on your needs.

____ Article
____ Book
____ Audio Tape

____ Video Tape
____ Text Book
____ Consultant

You will receive a PRINTOUT ONLY of resources available. You will need to locate materials through your library, bookstore, etc. Mail this request form with a Self-Addressed Stamped Envelope to:

Kentucky Department of Education
Primary School Branch
Division of Early Childhood
Office of Learning Programs Development

Your request will not be processed without a Self-Addressed Stamped Envelope.

PRIMARY PROGRAM RESOURCE SCHOOLS

Definition of Resource Schools - Schools that are now implementing some developmentally appropriate practices and/or one or more of the other critical attributes as outlined by the Kentucky Department of Education.

SCHOOL	BANK STREET	BETSY LAYNE ELEMENTARY	THE CHANCE SCHOOL
CONTACT	Ms. Nona Weeks	Mr. Winford Allen	Ms. Elizabeth Rightmyer
PHONE	212/222-6700	502/473-8290	502/425-6904
ADDRESS	610 West 112 Street New York, NY 10025	9831 East Avenue Valley Station, KY 40272	4200 Lime Kiln Lane Louisville, KY 40222
LENGTH OF OPERATION	75 years	pilot year	12 years
UNGRADED OR MULTIAGE	family groupings 6 mos.-3 yrs. overlapping mixed age grouping 3-13 yrs.	piloting non-graded 1-3	ungraded 1-3 self contained kindergarten
GROUPINGS	no testing for ability grouping	P.M. - multiage teaming ages 6-8 Sci./Soc. St./Health	mixed age groups that change depending on the task
SPECIAL POPULATIONS	mainstreamed	Special Teacher teams with Primary Teachers for Sci./Soc. St./Health	Not identified
CURRICULUM	Teacher developed curriculum integrates all content areas via studies of social phenomena relative to young children	Success Reading Box It/Bag It Math SUM All staff is teamed	Whole Language Success Model Miquon Math Weekly Field Trips Social Studies and Science Projects
EVALUATION	Wide variety ranges from standardized tests, Reading Skill Inventories, anecdotal records, observations	Comparison of year to year student profiles prepared by Jefferson County	CTBS Student portfolio Teachers write observation diaries
PARENT COMMUNICATION AND INVOLVEMENT	Minimum of two Parent-Teacher Conferences review children's academic and creative works Narrative reporting	Jefferson County report card Informal communication	Three Parent-Teacher Conferences each year Parents are active in all aspects of school programs

PRIMARY PROGRAM RESOURCE SCHOOLS

Definition of Resource Schools - Schools that are now implementing some developmentally appropriate practices and/or one or more of the other critical attributes as outlined by the Kentucky Department of Education.

SCHOOL	DIXIE ELEMENTARY	ESSEX	KEY SCHOOL
CONTACT	Ms. Linda Keller	Ms. Robbe Brooks	Ms. Patricia Bolanos
PHONE	606/299-9211	802/878-2584	317/226-4297
ADDRESS	1940 Eastwood Parkway Lexington, KY 40505	Browns River Road Essex Junction, VT 05452	1401 East Tenth Indianapolis, IN 46201
LENGTH OF OPERATION	Non-graded 25 years Other components are developing	Ethics Design for Learning for 20 years Multiage 10 years	4 years
UNGRADED OR MULTIAGE	Non-graded K-5 Multiage grouping	K-2 building 24 classrooms 7 multiage rooms	Multiage
GROUPINGS	Primary units Intermediate Units Collaborative/Team Model	Heterogeneous Family groupings Students may remain with the same teacher for up to 3 years.	Heterogeneous Primary classes Intermediate classes
SPECIAL POPULATIONS	All support services are delivered in the classroom environment. Individual student assessment & placement at appropriate skill levels.	Working toward collaborative services model. (Now a combination of pullout and collaboration)	Students are intermingled with heterogeneous classes.
CURRICULUM	Adopted Fayette County curriculum, Project SHARE Alternatives dependent upon the needs of the children.	Developmental curriculum to address the whole child. Choices of material/activities dependent upon child's needs. Teachers develop curriculum.	Theme based curriculum. Interdisciplinary teaching. Gardner's Theory of Multiple Intelligence.
EVALUATION	Fayette County reporting system Introducing parents to mastery through IEP's for Language Arts	Teachers compile student work in Language Arts folders, math folders, writing samples, anecdotal records and student observations.	Special report card. No letter grades. Student projects based on curriculum themes. Student video portfolio.
PARENT COMMUNICATION AND INVOLVEMENT	Parent-Teacher Conferences every six weeks. Encourage parents to observe classes. PTA coordinates volunteer program for all parents.	4 progress reports yearly incorporate teacher narratives 2 Parent-Teacher Conferences Newsletters Parent/School Partnership	Required attendance at 3 of 4 Parent-Teacher Conferences. Involvement in Committee Resource Committee.

PRIMARY PROGRAM RESOURCE SCHOOLS

Definition of Resource Schools - Schools that are now implementing some developmentally appropriate practices and/or one or more of the other critical attributes as outlined by the Kentucky Department of Education.

SCHOOL	SAFFELL STREET ELEMENTARY	STANTON ELEMENTARY	WHEELER ELEMENTARY
CONTACT	Mr. Max Workman	Ms. Faye King	Ms. Charlene Bush
PHONE	502/839-7368	606/663-4334	502/473-8349
ADDRESS	210 Saffell Street Lawrenceburg, KY 40342	P.O. Box 367 Stanton, KY 40380	5410 Cynthia Drive Louisville, KY 40291
LENGTH OF OPERATION	Planning and Developing Stages - 2 years	Teachers have been teaming for several years. First year for multiage grouping.	3 years
UNGRADED OR MULTIAGE	2nd year of development Age Appropriate Learning Philosophy now in place	Ungraded - multiage	Multiage non-graded 1-5
GROUPINGS	None	Modified Joplin Plan for Reading Team Teaching Cooperative Learning	Heterogeneous No tracking
SPECIAL POPULATIONS	Collaboratively serve special needs students	Equity for disadvantaged students. Consideration for groupings for cooperative learning strategies approach.	All children receive services in the regular classroom.
CURRICULUM	High Scope Success TLC Writing to Read	Process approach for Science and just beginning in Math and Reading. Reading-Whole language experience plus Joplin.	Inter-disciplinary multiage teaching team with curricular alignment focusing on continuous progress.
EVALUATION	Working toward narrative reporting Parent conferences	Developing portfolio assessment and a more specifically designed reporting system.	Non-graded pilot report card with a focus on new modes of assessment.
PARENT COMMUNICATION AND INVOLVEMENT	Examples: parent volunteers, report cards, conferences	Parent Volunteer Program Home Visitation Program Variety of efforts to keep parents informed.	Participatory management system.

PRIMARY PROGRAM RESOURCE SCHOOLS

Definition of Resource Schools - Schools that are now implementing some developmentally appropriate practices and/or one or more of the other critical attributes as outlined by the Kentucky Department of Education.

SCHOOL	WYCLIFFE	ST. JAMES CATHOLIC SCHOOL	ST. FRANCIS OF GOSHEN
CONTACT	Dr. Steven DeLapp	Mary Beth Bowling	Bob MacColl
PHONE	614/487-5145	502/454-0330	502/228-1197
ADDRESS	2405 Wycliff Road Columbus, OH 43221	1818 Edenside Avenue Louisville, KY 40204	11000 W. U.S. Highway 42 Goshen, KY 40026
LENGTH OF OPERATION	19 years	1 year	25 years
UNGRADED OR MULTIAGE	Combination classes K-1 2-3 4-5 1-2 3-4	Combination of multi-age and ungraded	K, 1-3, 4-5
GROUPINGS	Family groupings	Heterogeneous K-3 5 yr. olds - 1/2 day regrouping during day some ability grouping	Hetergeneous groupings
SPECIAL POPULATIONS	Mixture of resource classes (pullout) and individual and small group tutoring sessions.	None identified	None identified
CURRICULUM	Literature-Based-Whole-Language. Theme Teaching. Hands-On Activities utilizing appropriate experiences and materials for young children.	Success Reading/Language Miquon Math Skills Books/ Manipulatives Learning Centers	Whole Language Literature Based Projects Miquon Math Skills Book Math Lab
EVALUATION	Student skills checklists reflect performance and effort. Narrative included.	Portfolios Anecdotal recordings Continuous progress reporting	Continuous progress Portfolios Checklists
PARENT COMMUNICATION AND INVOLVEMENT	Parents are an integral part of the school. Parents as volunteers. Active P.T.O.	Actively involved in classrooms	Heavy parent involvement

PRIMARY PROGRAM RESOURCE SCHOOLS

Definition of Resource Schools - Schools that are now implementing some developmentally appropriate practices and/or one or more of the other critical attributes as outlined by the Kentucky Department of Education.

SCHOOL	STONESTREET ELEMENTARY	PRICE ELEMENTARY	BATES ELEMENTARY
CONTACT	Sharon Griffey	Janice Jones/Betty Hansel	Rita Johnson
PHONE	502/473-8333	502/473-8315	502/473-8209
ADDRESS	10007 Stonestreet Road Valley Station, KY 40207	5001 Garden Green Way Louisville, KY 40218	7601 Bardstown Road Louisville, KY 40299
LENGTH OF OPERATION	1 year	3 years	1 year
UNGRADED OR MULTIAGE	One ungraded team of four teachers	Three primary teams Multi-age	Two primary teams K,1,2,3 and 1,2,3
GROUPINGS	Heterogeneously grouped and regrouped	One team heterogeneously regrouped One team homogeneously regrouped One team both	Heterogeneously grouped for Science and Social Studies
SPECIAL POPULATIONS	Collaboration for Speech Some pull out Moving toward Inclusion	Some pullout Some collaboration	Collaboration/Consultation Model
CURRICULUM	whole language; box-it and bag-it math and other manipulatives; hands-on, interest-based science and social studies	Success reading Literature-based reading Math workbooks & manipulatives	Success reading
EVALUATION	Portfolios Anecdotal records	Continuous progress Portfolios Checklists	Report card conferences moving toward more conferences
PARENT COMMUNICATION AND INVOLVEMENT	Parents are supportive	Parental involvement with library, tutoring, health concerns, and awards	Parental involvement and support

PRIMARY PROGRAM RESOURCE SCHOOLS

Definition of Resource Schools - Schools that are now implementing some developmentally appropriate practices and/or one or more of the other critical attributes as outlined by the Kentucky Department of Education.

SCHOOL	CHINA GROVE ELEMENTARY	CENTRAL ELEMENTARY	ALCOA ELEMENTARY
CONTACT	Sandra Rodgers	Barbara Pederson	Dr. Robert D'Lozier
PHONE	704/857-7708	317/482-2000	615/982-3120
ADDRESS	China Grove, N.C.	515 E. Williams Street Lebanon, IN 46052	Alcoa, TN 37701
LENGTH OF OPERATION	7 years	6 months	1 year
UNGRADED OR MULTIAGE	Multi-age classrooms Team Teaching and Self-contained classes		Multi-age
GROUPINGS	Multi-age 1-3 and traditional groupings Family grouping in multi-age classroom	The school is in Phase I of moving to a primary program. The are still in self-contained classroom with children of one age.	Multi-age/multi-level
SPECIAL POPULATIONS	Collaboration/Consultation		
CURRICULUM	Whole Language Hands-on Math/Science Some Integrated Curriculum Use of Technology	Thematic interdisciplinary units based on research of Howard Gardner & Leslie Hart. Cooperative learning and whole language methods.	Thematic center approach. Whole language. Integrated subject areas across curriculum. Students have lots of input in curriculum
EVALUATION	District report teacher developed form Routine conferences	Grades Teacher anecdotal records Portfolios	No letter grades. Modified report to parents each six weeks. Teachers monitor progress. Parents attend conferences.
PARENT COMMUNICATION AND INVOLVEMENT	Parents are very supportive and involved.	Board members and citizens participate in school activities.	Parents surveyed to begin experimental program. Parents have open invitation to visit classroom.

PRIMARY PROGRAM RESOURCE SCHOOLS

Definition of Resource Schools - Schools that are now implementing some developmentally appropriate practices and/or one or more of the other critical attributes as outlined by the Kentucky Department of Education.

SCHOOL	EAGLE VALLEY ELEMENTARY		
CONTACT	John Reimers		
PHONE	303/328-6981		
ADDRESS	P.O. Box 780 Eagle, CO 81631		
LENGTH OF OPERATION	8 years		
UNGRADED OR MULTIAGE	Multi-age		
GROUPINGS	Heterogeneous family groupings Teaming and self-contained classes		
SPECIAL POPULATIONS	Speech - Collaboration Other - Primary pullout moving toward collaboration		
CURRICULUM	Whole Language Process Writing Thematic Instruction STAMM		
EVALUATION	Anecdotal Records Observations		
PARENT COMMUNICATION AND INVOLVEMENT	Volunteer program for parents and grandparents. Descriptive report cards.		

Primary School Resources (Cont.)

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PRIMARY SCHOOL
STAFF DEVELOPMENT GROUPS

Coordinators and Participating Districts

Bardstown Independent	**Coordinator: Patrick Hagan, Director of Instructional Services**
Breckinridge County	Judy Thomas, Principal
Bullitt County	Jan Grigsby, Assistant Superintendent for Elementary Education
Elizabethtown Independent	Brenda Priddy, Superintendent of Instruction
Hardin County Schools	Bobbie McKinney and Joy Carroll Miller, Directors of Elementary Education
LaRue County	James Bryan, Instructional Supervisor
Meade County	Dianne Brady, Principal
Univ. of Louisville	Ric Hovda
KDE Staff	Linda Hargan
	Mike Miller
Bulter County	**Coordinator: Patty Vaughn, Instructional Supervisor**
Edmonson County	Mary Cole, Elementary Supervisor
Grayson County	Edwinna Anderson, Instructional Supervisor
Hart County	Ruth Williams, Director of Ungraded Programs
Ohio County	Neil Taylor, Supervisor of Instruction
Muhlenberg County	Vena Raleigh, Chapter 1 Supervisor
Western Ky. Univ.	Betty Burruss
KDE Staff	Betty Polk
	Kate Shadoan
Erlanger-Elsmere Ind.	**Coordinator: Oliver Bryant, Principal**
Beechwood Independent	Dan Shull, Superintendent
Boone County	Marjorie Bowers, Director of Curriculum
Covington Independent	Jayne Morgenthal, Assistant Superintendent
Kenton County	Joyce Fortney, Instructional Supervisor
Walton-Verona Independent	Reed Tyler, Principal
Northern Ky. Univ.	Janet Miller
KDE Staff	Ruth Fitzpatrick
	Kay Anne Wilborn
Fayette County *	**Coordinator: Nawanna Fairchild, Director, Elemetnary Curriculum & Instruction**
Athems Elementary	Sarah Adams, Principal
Arlington Elemementary	Robin Frankhauser, Principal
Deep Springs Elementary	Hazel Olinger, Principal
Harrison Elementary	Helen Robinson, Principal
Julia R. Ewan Elementary	Larry Tipton, Principal
Lansdowne Elementary	Jane Gettler, Principal
Picadome Elementary	John McIntyre, Principal
Squires Elementary	Stanley J. Jordan, Principal
Univ. of Kentucky	Virginia Atwood
KDE Staff	Merry Denny
	Kay Freeland

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* Ex-Officio - Did not get grant.

Franklin County	**Coordinator: Carol Banks, Interim Superintendent**
Anderson County	Max Workman, Principal
	David Melloan, Instructional Supervisor
Frankfort Independent	Charlotte Wall, Instructional Supervisor
Mercer County	Michael Barnard, Principal
Scott County	Ken Wright, Elementary Curriculum Director
Washington County	Norman Darland, Supervisor
Woodford County	Sheila Hollin, Instructional Supervisor
	Tom McMillen, Principal
KDE Staff	Mary Wagoner
Ft. Thomas Independent	**Coordinator: John O'Brien, Instructional Supervisor**
Grant County	Peggy Spillman, Director of Curriculum & Staff Development
Newport Independent	Sharon Menkhaus, Instructional Supervisor
Pendleton County	Linda Tackett, Supervisor of Instruction
Robertson County	Patti Price, Special Services Coordinator
Silver Grove Independent	Diana Heidelberg, Principal
Wiliamstown Indepenent	Janis Fox, Instructional Supervisor
Northern Ky. Univ.	Rachelle Bruno
	Janet Miller
KDE	Diane Teasley
Hancock County	**Coordinator: Ann Evans, Instructional Supervisor**
Crittenden County	Nancy Stalion, Supervisor of Instruction
Daviess County	John Settle, Director of Elementary Education
Dawson Springs Independent	Jeannine Moore, Instructional Supervisor
Henderson County	Elaine Neely, Principal
Hopkins County	Carolyn Ferrell, Instructional Supervisor
McLean County	Earl Melloy, Instructional Supervisor
Webster County	Michael Farris, Assistant Superintendent
Union County	Keith Omer, Supervisor of Instruction
Badgett Regional Center	Jane Martin
Ky. Wesleyan	Yvonne Taylor
KDE	Joanne Jackson
	Rita Osborne
Jefferson County *	**Coordinators: Carol McCollum and Kathleen Nichter**
Jessamine County	**Coordinators: Sue Megee, Asst. Superintendent, and Richard Williams, Principal**
Berea Independent	Margaret Davis, Principal
Danville Independent	Kent Mann, Assistant Superintendent
Garrard County	Mary A. Davis, Principal
	Delmar Warren, Principal
Madison County	Clara Mae Parrish, Supervisor
	Bruce Bonner, Madison Model School
Eastern Ky. Univ.	Paul Wurtz
KDE	Betty Griffin
	Steve Henderson

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* Ex-Officio - Did not get grant.

Laurel County	**Coordinator: Pearl Jean Hughes, Asst. Superintendent**
Corbin Independent	Jeanette Ladenburger, Supervisor of Instruction
Harlan County	Sharon Dean, Principal
Harlan Independent	Enoch Foutch, Principal
Middlesboro Independent	Gale Parke, Principal
Whitley County	Herman Moore, Supervisor
Eastern Ky. Univ.	Joanne P. Dicke
KDE	Shirley Mikel
	Charlotte Kirk

McCracken County	**Coordinator: JoNell Mittendorf**
Calloway County	Nancy Lovett, Assistant Superintendent
Fulton County	Susan Caldwell-Tinkle, Principal
Graves County	Barbara Baker, Instructional Supervisor
Livingston County	Barbara Vick, Instructional Supervisor
Mayfield Independent	Leanna Austin, Instructional Supervisor
Murray Independent	Doralyn Lanier, Assistant Superintendent
Trigg County	Mary Ann Fourqurean, Supervisor
Murray State Univ.	Bob Malone
KDE Staff	Nancy Huffstutter

Oldham County	**Coordinator: Betty Edwards, Director of Curriculum**
Anchorage Independent	Marguerite McCall, Curriculum Director
Carroll County	Dale Brown, Assistant Superintednent
Eminence Independent	Sherry Burns, Gifted Coordinator
Henry County	Craig Kessler, Primary School Program Coordinator
Shelby County	Molly Sullivan, Supervisor of Instruction
Spalding Univ.	Marie Paule Hardy
KDE	Joanne Brooks

Pikeville Independent	**Coordinator: Anne Keene, Instructional Supervisor**
Floyd County	John Pitts, Instructional Supervisor
Johnson County	Rosemary Witten-Grigsby, Instuctional Supervisor
Pike County	Danna Stamper, Instructional Supervisoe
KDE	Judy Reed

Powell County	**Coordinator: Faye King, Principal**
Jackson Independent	Edith McClees, Instructional Supervisor
Lee County	Sharon Bush, Instructional Supervisor
Letcher County	Charlene Collins, Principal
Montgomery County	Barbara Amburgey, Director of Preschool & Primary Education
KDE	Beth Hargett

Pulaski County	**Coordinators: Lois Hatfield and Una Farmer, Instructional Supervisors**
Adair County	Trisha Collins, Principal
Campbellsville Independent	Jack Keeney, Principal
Clinton County	Rudy Thomas, Instructional Supervisor
Green County	Maxideen Pruitt, Elementary Supervisor
Marion County	Joyce Payne, Instructional Supervisor
Somerset Independent	Judy White, Supervisor
Wayne County	Herbert Wheat, Assistant Superintendent
	Anna Edwards, Principal
KDE	Joan Howard
	Tony Koester.

Rowan County	**Coordinator: Gary Trent, Principal, and Janie Allen, Instructional Supervisor**
Ashland Independent	Bill Burch
Fairview Independent	George Cooke Principal
Fleming County	Linda Donovan, Elementary Supervisor
Greenup County	Richard Barber, Supervisor
Nicholas County	Jane Becker, Supervisor
Lewis County	Helen Smith, Instructional Supervisor
Mason County	Kirby Wright, Instructional Supervisor
Morehead State Univ.	Phyllis Oaks Diane Ris Marium Williams
KDE	Carole Kruse
Simpson County	**Coordinators: Charles Campbell, Superintendent, and Penny Skillern, Instructional Supervisor**
Barren County	Carol Manion, Principal
Christian County	William Bell, Assistant Superintendent for Instruction Margaret Berry, Instructional Supervisor
Russellville Independent	Betty McLean, Instructional Supervisor
Todd County	Doris Powell, Instructional Supervisor
Western Ky. Univ.	Betty Burruss Toby Daniel
KDE	Betty Polk Kate Shadoan

Staff Development Offerings

Consult the Professional Development Programs information booklet and/or contact the Professional Development Coordinator in your district for current information regarding dates, times and locations of specific workshops.

As the implementation process proceeds, the following areas will continue to be offered upon request through the Department of Education.

- ACES Staff Development (Activity-Centered Elementary Science)
- Classroom and Program Modifications to Facilitate Learning
- Cooperative Learning
- Elementary Basic Arts K-3 in Music, Visual Arts, Dance and Drama for the Classroom Teacher
- High Scope Training
- Performance Assessment in Mathematics
- Performance Assessment in Writing
- P.S.MET: Problem Solving with Manipulatives for Elementary Teachers
- Science is Fun to Teach (SIFT)
- Thematic Approach to Integrated Curriculum
- Use of Technology in Mathematics
- Whole Language/Literature Based Instruction
- Writing Across the Curriculum
- Writing as a Process in Primary Schools
- Manipulative Math - NCTM Curriculum and Evaluation Standards in Primary School
- Developing Thinking Skills in Primary Schools
- Developing Consultative/Collaborative Skills
- Teacher Assistance Teams
- Effective IEP Implementation

Primary Program Glossary of Terms

This glossary is now the common language of the primary program. Terms have been grouped together for clarity and will be added on to an ongoing basis. Although individual understanding of these terms may vary, for continuity and consistency the Kentucky Department of Education has adopted the following terms:

Non-graded (Ungraded) Primary School - A school having a flexible system of grouping in which children are grouped together regardless of age and number of years in school and in which extensive effort is made to adapt instruction to individual differences.

Kentucky's Primary School Program - The program within the elementary school that includes children from the time they enter school until they are ready to enter the fourth grade. This ungraded program is dictated by the Primary School Position Statement and operates within the framework of the Critical Attributes as developed by the Department of Education.

Ungraded/Non-Graded - Term used to describe schools, classes, curriculum, etc. without concern for the years a child is in school, i.e., first, second or third grade. (Not to be confused with the elimination of letter grades.)

Resource Schools - Schools that are now implementing some developmentally appropriate practices and/or one or more of the other Critical Attributes as outlined by the Department of Education.

Model - A primary program in completion; one which includes all of the Critical Attributes as outlined by the Kentucky Department of Education.

Primary Staff Development Project - 16 regional groups working on staff development for the implementation of the primary school.

Critical Attributes - Those descriptors that define necessary components of the primary program. They are: developmentally appropriate educational practices, multi-age/multi-ability classrooms, continuous progress, authentic assessment, qualitative reporting methods, professional teamwork and positive parent involvement.

Developmental Appropriateness* - This concept of developmental appropriateness has two dimensions:

> **Age Appropriateness** - Human development research indicates that there are universal, predictable milestones of growth and change that occur in children during the first nine years of life. These predictable changes occur in all domains of development -- physical, emotional, social, cognitive and aesthetic. Knowledge of typical development of children within the age span served by the program provides a framework from which teachers prepare the learning environment and plan appropriate experiences.
>
> **Individual appropriateness** - Each child is a unique person with an individual pattern and timing of growth, as well as individual personality, learning style and family background. Both the curriculum and adults' interactions with children should be responsive to individual differences. Learning in young children is the result of interaction between the child's thoughts and experiences with materials, ideas and people. When these experiences match the child's developing abilities, while also challenging the child's interest and understanding, learning will take place.

* From: The Teacher's Ongoing Role in Creating A Developmentally Appropriate Early Childhood Program, Connecticut Department of Education.

Developmentally appropriate educational practices - Those educational practices and curriculum components which coincide with and foster developmental appropriateness (previously defined in this document). These would include an integrated curriculum, active child involvement and interaction, use of manipulatives and multi-sensory activities, a balance of teacher-directed and child-initiated activities, varied instructional strategies, and flexible groupings and regroupings.

Developmentally appropriate environments - Those environments which coincide with and foster developmental appropriateness (previously defined in this document)., i.e., tables or grouped desks instead of rows of separated desks; shelves with varied materials for a wide range of uses, all easily accessible to the children; a print rich classroom; home-like setting; etc.

Curriculum Framework - A statewide guide to influence curriculum development and instructional decision-making at the local level. The framework for Kentucky's Primary Program will identify teaching and assessment strategies, instructional material resources, ideas on how to incorporate the resources of the community, a directory of model teaching sites, and alternative ways of using school time (KRS 158.6451(4)).

Valued Outcome - Ability to complete tasks that have application to "real life" and are valued by the student and the adult world. (From: Council on School Performance Standards, Draft Document of Learning Goals in Measureable Terms)

Manipulatives - Concrete or hands-on instructional materials and games used in the classroom to introduce and reinforce skills (especially in math). The use of manipulatives is developmentally appropriate for young children who need to learn by using real objects.

Literature-based instruction - A strategy of teaching reading using good literature as the foundation. The language arts components (spelling, grammar, etc.) and content areas are taught around a particular book or piece of literature. From this, evolves skill development and related activities. Multiple copies of books and pieces that represent a wide range of literature, i.e., fiction, non-fiction, poetry, etc. are essential to this approach.

Whole Language - A dynamic, evolving philosophy with the core being the understanding that listening, speaking, writing and reading are not isolated for study but permeate the whole curriculum. Language is taught as a "whole", not by fragmented skills. Teachers and children take significant responsibility for learning and are actively involved in all the processes (listening, speaking, writing and reading) every day.

Team Teaching - Two or more teachers who together plan, teach and support each other with common and agreed upon roles and responsibilities. They teach to a combined group of students ,which may be grouped and regrouped.

Collaboration - The planning for, involvement with, and supporting of students by two or more concerned groups, i.e., teachers, aides, itinerant and resource teachers, parents, community representatives, etc.

Professional Teamwork - Members of the professional staff have regular opportunities to exchange information and ideas and cooperatively plan the instructional program. They may utilize team teaching, collaborative teaching, peer coaching, etc., in order to meet the needs of the students and provide support and assistance for each other.

Departmentalized Teaching - Two or more teachers who teach the same children but teach different subjects, i.e., teacher A teaches reading, social studies and art while teacher B teaches math, science and writing. The teaching is isolated and does not require any collaboration of planning or implementation. This practice is not consistent with the primary program

Heterogeneous Grouping - The grouping of children based on their differences, i.e., age, sex, race, achievement, etc. A heterogeneous group would be one that was composed of mixed ages, sex, abilities, etc.

Homogeneous Grouping - The grouping of students based on their similarities, i.e., chronological age, reading ability, test scores, etc.
(Johnny may be in Mrs. Tao's room because he is seven years old and this is his second year of school, he is in the red reading group because he is a very good reader, and he receives a special tutoring class for math because his standardized test score was lower than a particular number. Johnny was homogeneously grouped each time.)

Flexible grouping - a combination of homogeneous and heterogeneous grouping on an ad hoc basis.

Cooperative learning - An extensively researched instructional method in which students are heterogeneously grouped to produce academic and social gains. Students are individually accountable for their learning, yet also experience a sense of interdependency for the success of their group.

Family Grouping - a group of students that stay with the same classmates and teacher(s) for more than one year. For example, in a multi-age grouping of six, seven and eight year olds, approximately a third of the class would stay the same, a third would move to fourth grade and a third would be new to the class. A child could be in this class for three years.

Tracking - Designated groupings, which can last through the duration of schooling, reflecting student's abilities or interests. There may be tracks for slow, average and fast learners. In high school there may be tracks for college-bound students, vocational education, etc. This practice is not consistent with the primary program.

Integration/Correlation - teaching strategies in which concepts and skills from several content areas are taught simultaneously while studying a particular theme or topic, or working on a particular project. When the natural connections among the various content areas are recognized and teaching is structured to acknowledge and reinforce them, integration or correlation occurs. In integration there are no content boundaries. When subjects areas remain discrete, but a common theme serves as the organizer for developing instruction in each, then correlation is occurring.

Thematic Approach to Curriculum - An approach based on organizers that motivate students to investigate interesting ideas from multiple perspectives. The central theme becomes the catalyst for developing the concepts, generalizations, skills, attitudes, etc. Themes should encourage integration or correlation of various content areas. The rationale is grounded in a philosophy that young children learn most efficiently when subjects are perceived as worthy of their time and attention and when they are activity engaged in inquiry. These themes may be broad based or narrow in scope; may be used for one class, designated classes or the whole school; and may last for a few weeks up to several months.

Integrated Curriculum - Cutting across subject matter lines in order to bring together the various content areas of the curriculum into a meaningful and true to life association. Theme study is a technique for integrating curriculum but not all integrated curriculum revolves around a theme, i.e., whole language and writing across the curriculum are examples of integrated curriculum approaches which may or may not involve a thematic approach.

Continuous Progress - A student's unique progression through the primary program at his or her own rate without the comparison of others. Retention, promotion and assigned letter grades are not compatible with this progression. The curriculum and expectations for student performance in a continuous progress program are not linked to the child's age or number of years in school.

Performance Assessment - Assessment based on a child's actual performance within the context of the classroom as opposed to only tests or written assignments that may be quite different than the process a child used while learning the material.

Qualitative Reporting Methods - Regular home-school communications which describe how and what the child is learning, individual accomplishments, interests, abilities and attitudes. Progress is related in terms of the continuous growth and development of the whole child in non-comparative ways. Reporting encompasses formats such as formal narrative report cards, conferences, portfolios, journals, video tapes and anecdotal records.

Authentic Assessment - An assessment of what we actually want students to be able to do or understand. Assessment which occurs in the context of normal classroom involvement and that which reflects the actual learning experience, i.e., portfolios, journals, observations, taped readings, video taping, conferencing, etc. The tasks are frequently somewhat open-ended and judgement is required to evaluate the level of performance.

Anecdotal Record - A written record kept in a positive tone of a child's progress based on milestones particular to that child's social, emotional, physical, aesthetic and cognitive development. Recording happens throughout the day while actual activities are occurring. Recordings are made when appropriate and are not forced, in other words you may go a few days without reporting on a particular child if there is nothing that bears recording. This method is informal and encourages the use of a note pad, sticky notes, a checklist with space for notes, etc. Continuous comments are recorded about what a child can do and his achievements as opposed to what he cannot do, i.e., Johnny has been fighting continuously. Today he sits in a group for ten minutes but then hits his neighbor and has to be removed from the group. The anecdotal record may read something like: Johnny sat nicely and attentively for ten minutes in group time!!

Positive Parent Involvement - The establishment of productive relationships between the school and the home, individuals, or groups which enhance communication, promote understanding and provide opportunities for children to interact with people, places, and things in their immediate environment and beyond.

How Kids Learn

BY BARBARA KANTROWITZ & PAT WINGERT

Ages 5 through 8 are wonder years. That's when children begin learning to study, to reason, to cooperate. We can put them in desks and drill them all day. Or we can keep them moving, touching, exploring. The experts favor a hands-on approach, but changing the way schools teach isn't easy. The stakes are high and parents can help.

It's time for number games in Janet Gill's kindergarten class at the Greenbrook School in South Brunswick, N.J. With hardly any prodding from their teacher, 23 five- and six-year-olds pull out geometric puzzles, playing cards and counting equipment from the shelves lining the room. At one round table, a group of youngsters fits together brightly colored wooden shapes. One little girl forms a hexagon out of triangles. The others, obviously impressed, gather round to count up how many parts are needed to make the whole.

After about half an hour, the children get ready for story time. They pack up their counting equipment and settle in a circle around Gill. She holds up a giant book about a zany character called Mrs. Wishy-washy who insists on giving farm animals a bath. The children recite the whimsical lines along with Gill, obviously enjoying one of their favorite tales. (The hallway is lined with drawings depicting the children's own interpretation of the book; they've taken a few literary liberties, like substituting unicorns and dinosaurs for cows and pigs.) After the first reading, Gill asks for volunteers to act out the various parts in the book. Lots of hands shoot up. Gill picks out four children and they play their parts enthusiastically. There isn't a bored face in the room.

This isn't reading, writing and arithmetic the way most people remember it. Like a growing number of public- and private-school educators, the principals and teachers in South Brunswick believe that children between the ages of 5 and 8 have to be taught differently from older children. They recognize that young children learn best through active, hands-on teaching methods like games and dramatic play. They know that children in this age group develop at varying rates and schools have to allow for these differences. They also believe that youngsters' social growth is as essential as their academic achievement. Says Joan Warren, a teacher consultant in South Brunswick: "Our programs are designed to fit the child instead of making the child fit the school."

Educators call this kind of teaching "developmentally appropriate practice"—a curricu-

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A 'basics' classroom is still the norm

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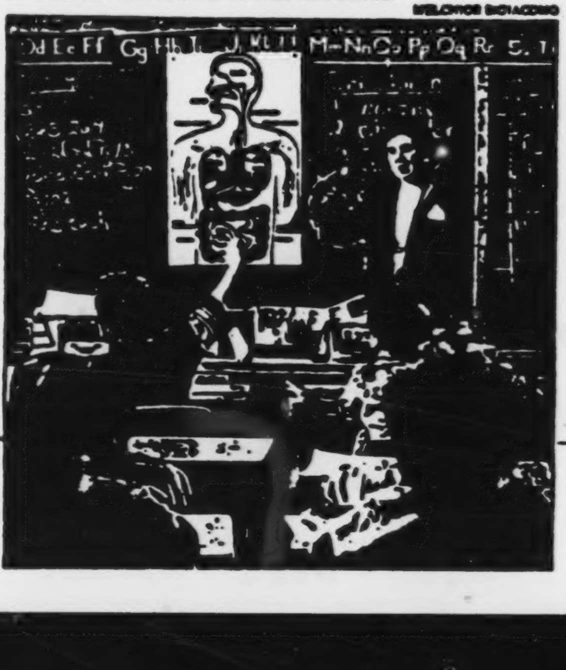

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Numbers don't seem abstract and forbidding if a child has dice to throw or blocks to count

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lum based on what scientists know about how young children learn These ideas have been slowly emerging through research conducted over the last century, particularly in the past 30 years. Some of the tenets have appeared under other names—progressivism in the 1920s, open education in the 1970s. But they've never been the norm. Now, educators say that may be about to change. "The entire early-childhood profession has amassed itself in unison behind these principles," says Yale education professor Sharon Lynn Kagan. In the last few years, many of the major education organizations n the country—including the National Association for the Education of Young Children and the National Association of State Boards of Education—have endorsed remarkably similar lans for revamping kindergarten through third grade.

Bolstered by opinions from the experts, individual states are eginning to take action. Both California and New York have ppointed task forces to recommend changes for the earliest rades. And scores of individual school districts like South runswick, figuring that young minds are a terrible thing to aste, are pushing ahead on their own.

The evidence gathered from research in child development is compelling that even groups like the Council for Basic ducation, for years a major supporter of the traditional forat, have revised their thinking. "The idea of putting small il[illegible]n in front of workbooks and asking them to sit at their s [illegible]l day is a nightmare vision," says Patte Barth, associate itor of Basic Education, the council's newsletter.

At this point, there's no way of knowing how soon change will come or how widespread it will be. However, there's a growing recognition of the importance of the early grades For the past few years, most of the public's attention has focused on older children, especially teenagers. "That's a Band-Aid kind of approach," says Anne Dillman, a member of the New Jersey State Board of Education. "When the product doesn't come out right, you try and fix it at the end. But we really have to start at the beginning." Demographics have contributed to the sense of urgency. The baby boomlet has replaced the baby-bust generation of the 1970s. More kids in elementary school means more parents asking if there's a better way to teach. And researchers say there is a better way. "We've made remarkable breakthroughs in understanding the development of children, the development of learning and the climate that enhances that," says Ernest Boyer of The Carnegie Foundation for the Advancement of [illegible]eaching. But, he adds, too often, "what we know in theory and what we're doing in the classroom are very different."

The early grades pose special challenges because that's when children's attitudes toward school and learning are shaped, says Tufts University psychologist David Elkind. As youngsters move from home or preschool into the larger, more competitive world of elementary school, they begin to make judgments about their own abilities. If they feel inadequate, they may give up. Intellectually, they're also in transition, moving from the intensely physical exploration habits of infancy and toddlerhood

JOHN FICARA—NEWSWEEK

A good teacher gets down with her students

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to more abstract reasoning. Children are born wanting to learn. A baby can spend hours studying his hands; a toddler is fascinated by watching sand pour through a sieve. What looks like play to an adult is actually the work of childhood, developing an understanding of the world. Studies show that the most effective way to teach young kids is to capitalise on their natural inclination to learn through play.

But in the 1980s, many schools have tried to do just the opposite, pressure instead of challenge. The "back to basics" movement meant that teaching methods intended for high-school students were imposed on first graders. The lesson of the day was more: more homework, more tests, more discipline. Children should be behind their desks, not roaming around the room. Teachers should be at the head of the classrooms, drilling knowledge into their charges. Much of this was a reaction against the trend toward open education in the '70s. Based on the British system, it allowed children to develop at their own pace within a highly structured classroom. But too many teachers and principals who tried open education thought that it meant simply tearing down classroom walls and letting children do whatever they wanted. The results were often disastrous. "Because it was done wrong, there was a backlash against it," says Sue Bredekamp of the National Association for the Education of Young Children.

At the same time, parents, too, were demanding more from their elementary schools. By the mid-1980s, the majority of 3- and 4-year-olds were attending some form of preschool. And their parents expected these classroom veterans to be reading by the second semester of kindergarten. But the truth is that many 5-year-olds aren't ready for reading—or most of the other academic tasks that come easily to older children—no matter how many years of school they've completed. "We're confusing the number of years children have been in school with brain development," says Martha Denckla, a professor of neurology and pediatrics at Johns Hopkins University. "Just because a child

The Lives and Times of Children

Each youngster proceeds at his own pace, but the learning curve of a child is fairly predictable. Their drive to learn is awesome, and careful adults can nourish it. The biggest mistake is pushing a child too hard, too soon.

● Infants and Toddlers

They're born to learn. The first important lesson is trust, and they learn that from their relationships with their parents or other caring adults. Later, babies will begin to explore the world around them and experiment with independence. As they mature, infants slowly develop gross motor (sitting, crawling, walking) and fine motor (picking up tiny objects) skills. Generally, they remain egocentric and are unable to share or wait their turn. New skills are perfected through repetition, such as the babbling that leads to speaking.

■ 18 months to 3 years

Usually toilet training becomes the prime learning activity. Children tend to concentrate on language development and large-muscle control through activities like climbing on jungle gyms. Attention spans lengthen enough to listen to uncomplicated stories and carry on conversations. Vocabulary expands to about 200 words. They enjoy playing with one other child, or a small group, for short periods, and learn that others have feelings too. They continue to look to parents for encouragement and protection, while beginning to accept limits on their behavior.

▲ 3-year-olds

Generally, they're interested in doing things for themselves and trying to keep up with older children. Their ability to quietly listen to stories and music remains limited. They begin telling stories and jokes. Physical growth slows, but large-muscle development continues as children run, jump and ride tricycles. They begin to deal with cause and effect; it's time to plant seeds and watch them grow.

● 4-year-olds

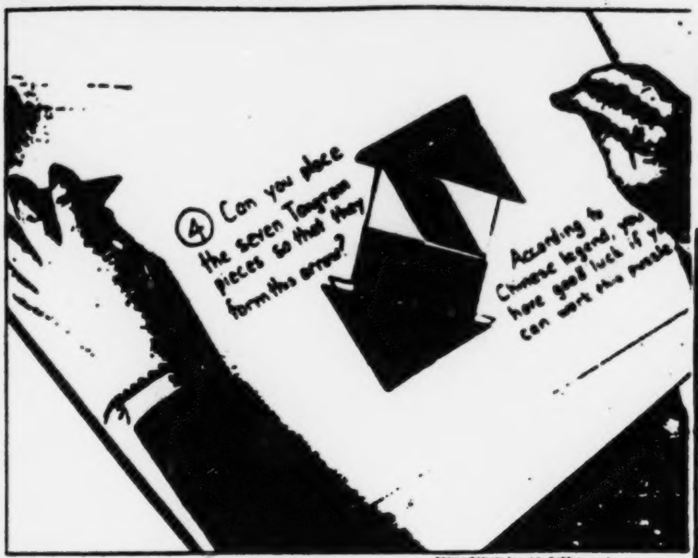
They develop better small motor skills, such as cutting with scissors, painting, working with puzzles and building things.

goes to day care at age 3 doesn't mean the human brain mutates into an older brain. A 5-year-old's brain is still a 5-year-old's brain."

As part of the return to basics, parents and districts demanded hard evidence that their children were learning. And some communities took extreme measures. In 1985 Georgia became the first state to require 6-year-olds to pass a standardized test before entering first grade. More than two dozen other states proposed similar legislation. In the beginning Georgia's move was hailed as a "pioneering" effort to get kids off to a good start. Instead, concedes state school superintendent Werner Rogers, "We got off on the wrong foot." Five-year-olds who used to spend their days finger-painting or singing were hunched over ditto sheets, preparing for the big exam. "We would have to spend a month just teaching kids how to take the test," says Beth Hunnings, a kindergarten teacher in suburban Atlanta. This year Georgia altered the tests in favor of a more flexible evaluation; other states have changed their minds as well.

The intense, early pressure has taken an early toll. Kindergartners are struggling with homework. First graders are taking spelling tests before they even understand how to read. Second graders feel like failures. "During this critical period," says David Elkind in his book "Miseducation," "the child's budding sense of competence is frequently under attack, not only from inappropriate instructional practices ... but also from the hundred and one feelings of hurt, frustration and rejection that mark a child's entrance into the world of schooling, competition and peer-group involvement." Adults under similar stress can rationalize setbacks or put them in perspective based on previous experiences; young children have none of these defenses. Schools that demand too much too soon are setting kids off on the road to failure.

It doesn't have to be this way. Most experts on child development and early-childhood education believe that young children learn much more readily if the teaching methods meet their special needs:


④ Can you place the seven Tangram pieces so that they form this arrow?
According to Chinese legend, you have good luck if y can work this puzzle

Good math lessons come in all sizes and shapes

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Differences in thinking: The most important ingredient of the nontraditional approach is hands-on learning. Research begun by Swiss psychologist Jean Piaget indicates that somewhere between the ages of 6 and 9, children begin to think abstractly instead of concretely. Younger children learn much more by touching and seeing and smelling and tasting than by just listening. In other words, 6-year-olds can easily understand addition and subtraction if they have actual objects to count instead of a series of numbers written on a blackboard. Lectures don't help. Kids learn to reason and communicate by engaging in conversation. Yet most teachers still talk at, not with, their pupils.

Physical activity: When they get to be 10 or 11, children can sit still for sustained periods. But until they are physically ready for long periods of inactivity, they need to be active in the classroom. "A young child has to make a conscious effort to sit still," says Denckla. "A large chunk of children can't do it for very long. It's a very energy-consuming activity for them." Small children actually get more tired if they have to sit still and listen to a teacher talk than if they're allowed to move around in the classroom. The frontal lobe, the part of the brain that applies the brakes to children's natural energy and curiosity, is still immature in 6-

y can master colors, sizes and shapes. y should be read to and should be encour- d to watch others write; let them scribble aper but try to keep them away from walls.

5-year-olds

y begin to understand counting as a one- e correlation. Improved memories make sier for them to recognize meaningful ds, and with sharper fine motor skills, some ren will be able to write their own names.

Both 4s and 5s

groups learn best by interacting with le and concrete objects and by trying to real problems. They can learn from s and books, but only in ways that relate eir own experience. Socially, these chil- are increasingly interested in activities de their immediate family. They can play ups for longer periods, learning lessons operation and negotiation. Physically, muscle development continues, and such as balancing emerge.

-year-olds

st in their peers continues to increase, ey become acutely aware of compari- etw [illegible] themselves and others. It's a taste of adolescence: does the group accept them? Speech is usually well developed, and children are able to joke and tease. They have a strong sense of true and false and are eager for clear rules and definitions. However, they have a difficult time differentiating between minor and major infractions. Generally, children this age are more mature mentally than physically and unable to sit still for long periods. They learn better by firsthand experiences. Learning by doing also encourages children's "disposition" to use the knowledge and skills they're acquiring.

■ 7- to 8-year-olds

During this period, children begin developing the ability to think about and solve problems in their heads, but some will continue to rely on fingers and toes to help them find the right answer. Not until they're 11 are most kids capable of thinking purely symbolically; they still use real objects to give the symbols—such as numbers—meaning. At this stage they listen better and engage in give and take. Generally, physical growth continues to slow, while athletic abilities improve—children are able to hit a softball, skip rope or balance on a beam. Sitting for long periods is still more tiring than running and jumping.

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to 9-year-olds, Denckla says. As the lobe develops, so does what Denckla describes as "boredom tolerance." Simply put, learning by doing is much less boring to young children.

Language development: In this age group, experts say language development should not be broken down into isolated skills—reading, writing and speaking. Children first learn to reason and to express themselves by talking. They can dictate stories to a teacher before they actually read or write. Later, their first attempts at composition do not need to be letter perfect; the important thing is that they learn to communicate ideas. But in many classrooms, grammar and spelling have become more important than content. While mastering the technical aspects of writing is essential as a child gets older, educators warn against emphasizing form over content in the early grades. Books should also be interesting to kids—not just words strung together solely for the purpose of pedagogy. Psychologist Katherine Nelson of the City University of New York says that her extensive laboratory and observational work indicates that kids can learn language—speaking, writing or reading—only if it is presented in a way that makes sense to them. But many teachers still use texts that are so boring they'd put anybody to sleep.

Socialization: A youngster's social development has a profound effect on his academic progress. Kids who have trouble getting along with their classmates can end up behind academically as well and have a higher incidence of dropping out. In the early grades especially, experts say youngsters should be encouraged to work in groups rather than individually so that teachers can spot children who may be having problems making friends. "When children work on a project," says University of Illinois education professor Lillian Katz, "they learn to work together,

In Japan, First Grade Isn't a Boot Camp

Japanese students have the highest math and science test scores in the world. More than 90 percent graduate from high school. Illiteracy is virtually nonexistent in Japan. Most Americans attribute this success to a rigid system that sets youngsters on a lock-step march from cradle to college. In fact, the early years of Japanese schooling are anything but a boot camp; the atmosphere is warm and nurturing. From kindergarten through third grade, the goal is not only academic but also social—teaching kids to be part of a group so they can be good citizens as well as good students. "Getting along with others is not just a means for keeping the peace in the classroom but something which is a valued end in itself," says American researcher Merry White, author of "The Japanese Educational Challenge."

ROBERT WALLIS—SIPA

Lessons in teamwork start early and last a lifetime

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Lessons in living and working together grow naturally out of the Japanese culture. Starting in kindergarten, youngsters learn to work in teams, with brighter students often helping slower ones. All children are told they can succeed if they persist and work hard. Japanese teachers are expected to be extremely patient with young children. They go over lessons step by step and repeat instructions as often as necessary. "The key is not to scold [children] for small mistakes," says Yukio Ueda, principal of Mita Elementary School in Tokyo. Instead, he says, teachers concentrate on praising and encouraging their young charges.

As a result, the classrooms are relaxed and cheerful, even when they're filled with rows of desks. On one recent afternoon a class of second graders at Ueda's school was working on an art project. Their assignment was to build a roof with poles made of rolled-up newspapers. The children worked in small groups, occasionally asking their teacher for help. The room was filled with the sound of eager youngsters chatting about how to get the job done. In another second-grade class, the subject was math. Maniko Inoue, the teacher, suggested a number game to practice multiplication. After a few minutes of playing it, one boy stood up and proposed changing the rules just a bit to make it more fun. Inoue listened carefully and then asked if the other students agreed. They cheered, "Yes, yes," and the game continued according to the new rules.

Academics are far from neglected in the early grades. The Education Ministry sets curriculum standards and goals for each school year. For example, third graders by the end of the year are supposed to be able to read and write 505 characters (out of some 2,000 considered essential to basic literacy). Teachers have time for play and lessons: Japanese children attend school for 240 days, compared with about 180 in the United States.

Mothers' role: Not all the teaching goes on in the classroom. Parents, especially mothers, play a key role in education. Although most kindergartens do not teach writing or numbers in any systematic way, more than 80 percent of Japanese children learn to read or write to some extent before they enter school. "It is as if mothers had their own built-in curriculum," says Shigefumi Nagano, a director of the National Institute for Educational Research. "The first game they teach is to count numbers up to 10."

For all their success in the early grades, the Japanese are worried they're not doing well enough. After a recent national curriculum review, officials were alarmed by what Education Minister Takeo Nishioka described as excessive "bullying and misconduct" among children—the result, according to some Japanese, of too much emphasis on material values. So three years from now, first and second graders will no longer be studying social studies and science. Instead, children will spend more time learning how to be good citizens. That's "back to basics"—Japanese style.

BARBARA KANTROWITZ *with*
HIDEKO TAKAYAMA *in Tokyo*

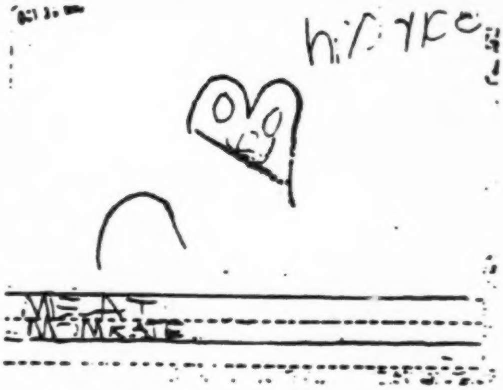
to disagree, to speculate, to take turns and de-escalate tensions. These skills can't be learned through lecture. We all know people who have wonderful technical skills but don't have any social skills. Relationships should be the first 'R'."

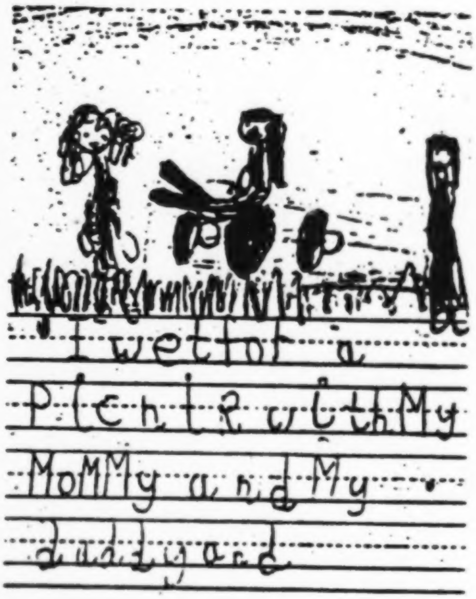
Feelings of competence and self-esteem: At this age, children are also learning to judge themselves in relation to others. For most children, school marks the first time that their goals are not set by an internal clock but by the outside world. Just as the 1-year-old struggles to walk, 6-year-olds are struggling to meet adult expectations. Young kids don't know how to distinguish between effort and ability, says Tynette Hills, coordinator of early-childhood education for the state of New Jersey. If they try hard to do something and fail, they may conclude that they will never be able to accomplish a particular task. The effects of obvious methods of comparison, such as posting grades, can be serious. Says Hills: "A child who has had his confidence really damaged needs a rescue operation."

Rates of growth: Between the ages of 5 and 9, there's a wide range of development for children of normal intelligence. "What's appropriate for one child may not be appropriate for another," says Dr. Perry Dyke, a member of the California State Board of Education. "We've got to have the teachers and the staff reach children at whatever level they may be at . . . That takes very sophisticated teaching." A child's pace is almost impossible to predict beforehand. Some kids learn to read on their own by kindergarten; others are still struggling to decode words two or three years later. But by the beginning of the fourth grade, children with very different histories often read on the same level. Sometimes, there's a sudden "spurt" of learning, much like a growth spurt, and a child who has been behind all year will catch up in just a few weeks. Ernest Boyer and others think that multigrade classrooms, where two or three grades are mixed, are a good solution to this problem—and a way to avoid the "tracking" that can hurt a child's self-esteem. In an ungraded classroom, for example, an older child who is having problems in a particular area can practice by tutoring younger kids.

Putting these principles into practice has never been easy. Forty years ago Milwaukee abolished report cards and started sending home ungraded evaluations for kindergarten through third grade. "If anything was developmentally appropriate, those ungraded classes were," says Millie Hoffman, a curriculum specialist with the Milwaukee schools. When the back-to-basics movement geared up nationally in the early 1980s, the city bowed to pressure. Parents started demanding letter grades on report cards. A traditional, direct-teaching approach was introduced into the school system after some students began getting low scores on standardized tests. The school board ordered basal readers with controlled vocabularies and contrived stories. Milwaukee kindergarten teachers were so upset by these changes that they convinced the board that their students didn't need most of the standardized tests and the workbooks that go along with the readers.

Some schools have been able to keep the progressive format. Olive School in Arlington Heights, Ill., has had a nontraditional curriculum for 22 years. "We've been able to do it because parents are involved, the teachers really care and the children do well," says principal Mary Stitt. "We feel confident that we know what's best for kids." Teachers say they spend a lot of time





Learning to Write by Writing

Children's first efforts at writing need not be letter perfect. Spelling and grammar can be learned later. In the early years kids should just get used to the idea of writing. Here are samples of one child's efforts over a three-year period, starting at the age of 5.

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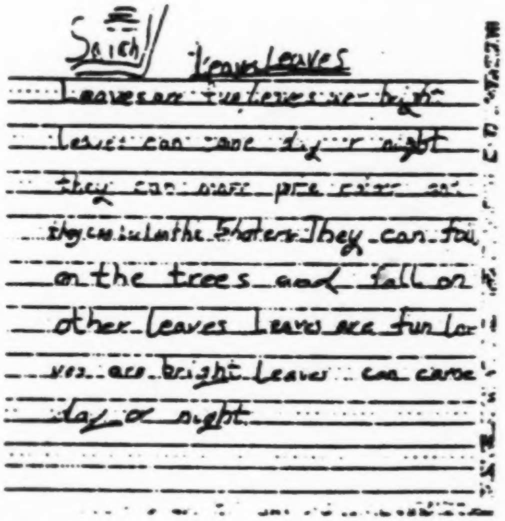
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A Primer for Parents

When visiting a school, trust your eyes. What you see is what your child is going to get.

● Teachers should talk to small groups of children or individual youngsters; they shouldn't just lecture.

■ Children should be working on projects, active experiments and play; they shouldn't be at their desks all day filling in workbooks.

▲ Children should be dictating and writing their own stories or reading real books.

● The classroom layout should have reading and art areas and space for children to work in groups.

■ Children should create freehand artwork, not just color or paste together adult drawings.

▲ Most importantly, watch the children's faces. Are they intellectually engaged, eager and happy? If they look bored or scared, they probably are.

educating parents about the teaching methods. "Parents always think school should be the way it was for them," says first-grade teacher Cathy Sauer. "As if everything else can change and progress but education is supposed to stay the same. I find that parents want their children to like school, to get along with other children and to be good thinkers. When they see that happening, they become convinced."

Parental involvement is especially important when schools switch from a traditional to a new format. Four years ago, Anne Norford, principal of the Brownsville Elementary School in Albemarle County, Va., began to convert her school. Parents volunteer regularly and that helps. But the transition has not been completely smooth. Several teachers refused to switch over to the more active format. Most of them have since left the school, Norford says. There's no question that some teachers have trouble implementing the developmentally appropriate approach. "Our teachers are not all trained for it," says Yale's Kagan. "It takes a lot of savvy and skill." A successful child-centered classroom seems to function effortlessly as youngsters move from activity to activity. But there's a lot of planning behind it—and that's the responsibility of the individual teacher. "One of the biggest problems," says Norford, "is trying to come up with a program that every teacher can do—not just the cadre of single people who are willing to work 90 hours a week." Teachers also have to participate actively in classroom activities and give up the automatic mantle of authority that comes from standing at the blackboard.

Teachers do better when they're involved in the planning and decision making. When the South Brunswick, N.J., schools decided in the early 1980s to change to a new format, the district spent several years studying a variety of curricula. Teachers participated in that research. A laboratory school was set up in the summer so that teachers could test materials. "We had the support of the teachers because teachers were part of the process," says teacher consultant Joan Warren.

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Making change is one way to learn subtraction

JOHN FICARA—NEWSWEEK

AR LITTLE BAKER

One residue of the back-to-basics movement is the demand for accountability. Children who are taught in nontraditional classrooms can score slightly lower on commonly used standardized tests. That's because most current tests are geared to the old ways. Children are usually quizzed on specific skills, such as vocabulary or addition, not on the concepts behind those skills. "The standardized tests usually call for one-word answers," says Carolyn Topping, principal of Mesa Elementary School in Boulder, Colo. "There may be three words in a row, two of which are misspelled and the child is asked to circle the correctly spelled word. But the tests never ask, 'Does the child know how to write a paragraph?' "

Even if the tests were revised to reflect different kinds of knowledge, there are serious questions about the reliability of tests on young children. The results can vary widely, depending on many factors—a child's mood, his ability to manipulate a pencil (a difficult skill for many kids), his reaction to the person administering the test. "I'm appalled at all the testing we're doing of small children," says Vanderbilt University professor Chester Finn, a former assistant secretary of education under the Reagan administration. He favors regular informal reviews and teacher evaluations to make sure a student understands an idea before moving on to the next level of difficulty.

Tests are the simplest method of judging the effectiveness of a classroom—if not always the most accurate. But there are other ways to tell if children are learning. If youngsters are excited by what they are doing, they're probably laughing and talking to one another and to their teacher. That communication is part of the learning process. "People think that school has to be either free play or all worksheets," says Illinois professor Katz. "The truth is that neither is enough. There has to be a balance between spontaneous play and teacher-directed work." And, she adds, "you have to have the other component. Your class has to have intellectual life."

Katz, author of "Engaging Children's Minds," describes two different elementary-school classes she visited recently. In one, children spent the entire morning making identical pictures of traffic lights. There was no attempt to relate the pictures to anything else the class was doing. In the other class, youngsters were investigating a school bus. They wrote to the district and asked if they could have a bus parked in their lot for a few days. They studied it, figured out what all the parts were for and talked about traffic rules. Then, in the classroom, they built their own bus out of cardboard. They had fun, but they also practiced writing, problem solving, even a little arithmetic. Says Katz: "When the class had their parents' night, the teacher was ready with reports on how each child was doing. But all the parents wanted to see was the bus because their children had been coming home and talking about it for weeks." That's the kind of education kids deserve. Anything less should get an "F."

With HOWARD MANLY *in Atlanta and bureau reports*

THE WHYS AND HOWS OF THE MULTI-AGE PRIMARY CLASSROOM

Reprinted with permission from the Summer 1990 issue of the *American Educator*, the quarterly journal of the American Federation of Teachers.

BY KATHLEEN CUSHMAN

YOU WOULD never know, talking to the teachers who do it, that running an elementary school classroom of mixed-age children is such a big deal. From the outside, to be sure, it seems a radical concept, ambitious and fraught with difficulties of every kind. Why else would the open-classroom mixed-age experiments of the sixties and seventies have dwindled so sharply in the past decade and a half? Why else are so few public schools now trying it, so few researchers studying it, and so many filled with mistrust at the whole idea of "family groupings" in a primary classroom?

Yet in Norma Leutzinger's combined first- and second-grade classroom at New York City's Central Park East II Elementary School, the concept fits as comfortably as a favorite suit of clothes. Around the room at groups of tables, twenty-eight children work quietly, reading books they have chosen or writing in their journals. They group and regroup frequently, at Norma's prompting: now into a fifteen-minute discussion with the whole class in a circle; now dispersing to chat while they choose materials to work with in groups of two and three; now intent again at their tables as the teacher and her aide move from child to child to speak with them in lowered voices.

Leutzinger's class, which includes twenty-eight children ranging in age from six to nine by the end of the school year, is one of a small but increasing number of classes in this country where early grades are combined in different ways. We tracked down three of them to see what is going on, both in theory and in practice, when a school chooses a mixed-age alternative to the conventional single-grade system. What we discovered was a range of techniques loosely linked by a developmental, child-centered philosophy of learning but otherwise as idiosyncratic as American education itself. If this is a trend, it is one with room for individual variation; and the schools here represent not only different approaches but different stages of those approaches.

One way to structure classes is that of Central Park East, where teachers like Norma Leutzinger have a combined class of first- and second-graders or third- and fourth-graders, and children stay with the same teacher for two years. Aside from her students' forays outside the classroom for music and the arts, Norma is responsible for teaching all subjects herself, and she organizes

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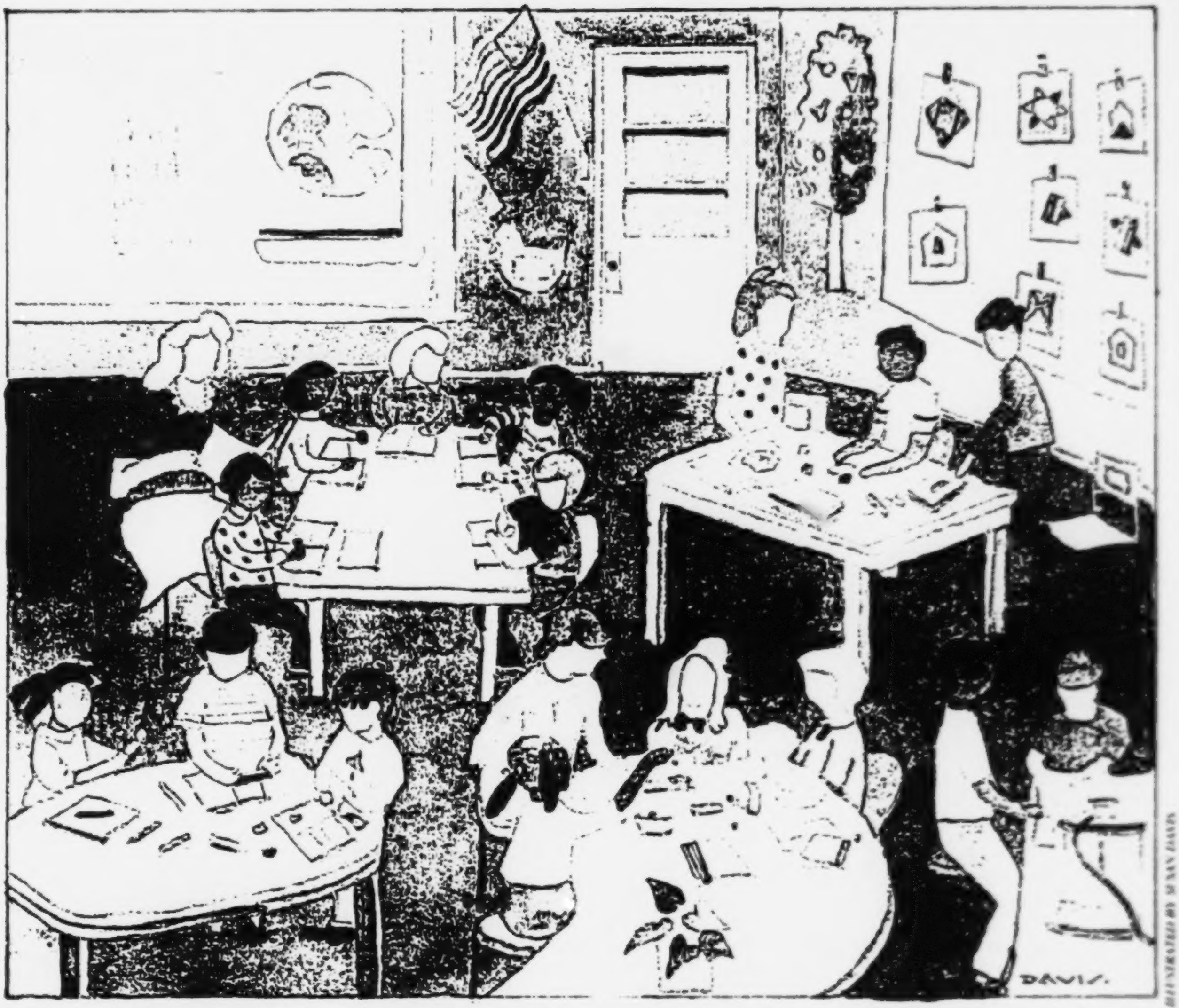
Kathleen Cushman writes and edits Horace, *the journal of the Coalition of Essential Schools, a high school reform movement based at Brown University.*



ILLUSTRATED BY SUSAN DAVIS

the class differently for instruction depending on her goals. In social studies and science, the group often meets as a whole; but when it comes to math, she will teach two separate lessons at first- and second-grade levels. Language arts is so integral a part of classroom life that it cannot be categorized: sometimes the class meets together, sometimes in small groups, and sometimes on an individual basis.

Across the river in the Brownsville section of Brooklyn, children in a P.S. 41 class of seven- and eight-year-olds are working on simple addition, while in the classroom next door a class of eight- and nine-year-olds does higher-level math problems. But since the classrooms open onto a common hall—along with another room of special needs students ages six to ten—any student can easily move into another class for work in this subject. It takes joint planning to carry this off; the teachers in P.S. 41's "core teams" of three or four teachers share the same free period and lunch period, allowing them time to talk things through. They know all the children in their cluster of classrooms and work with them all at some point, possibly in a project that involves several classes together, or because children cross class lines for special instruction, say, in reading. And though children will not necessarily stay with the same teacher for two years, the cluster technique de-emphasizes their grade level in favor of an identification with the core team as a whole.

At P.S. 41, teachers work together to determine how best to share instruction of their different-aged children. But at Sands Montessori elementary school in Cincinnati, teacher Mary Motz knows beforehand exactly what the Montessori system expects in her classroom of six- to nine-year-olds. Montessori schooling is notable in the United States for the extent to which it puts into practice a comprehensive theory, complete with training and materials. Working on the floor around her classroom, some of Motz's students are absorbed in private tasks; others work in mixed-age groups of two or three, helping each other with different activities. All will work their way eventually through a series of learning tasks that make up the Montessori curriculum; and even though one younger child appears to be doing nothing at all with his materials, Motz is happy. "He's watching the children on the next mat," she whispers. "He'll be asking me if he can learn that next."

That expectation of continuous progress through a series of skills marks a few other well-organized educational systems here and abroad. Individually Guided Education (IGE), developed by the Wisconsin Research and Development Center for Cognitive Learning, provides guidance to participating schools that want a "continuous progress" method of learning in a nongraded class. And in Great Britain, where primary schools have been organized since the 1960s into mixed-age groupings, the system expects every seven-year-old, for example, to be able to demonstrate mastery of certain math skills before moving into the next level of mixed-age learning.

All these models depend, at their core, on a philosophy of learning based on the developmental theories of Jean Piaget, Jerome Bruner, and others. Children in the early years of school do not learn at the same pace, such educators agree. In fact, they enter school with a "mental age" that varies by as much as four years, and they progress at their own rate from a largely concrete way of learning and thinking to the more abstract one reached in later stages. Because the pace of this development is so varied, mixed-age advocates say, it makes little sense to sort and label children into fixed grade levels from an early age—especially if the result is retention and an early sense of failure for the child. Better to extend the age range of a primary class and thus provide a nurturing, success-oriented environment for children at widely different developmental levels.

By creating a model that expects diversity rather than uniformity among kids, many of the "problems" in a single-grade class lose their destructive grip over teachers and students both. More advanced students can learn together in mixed-age groups, and slow ones can be given the time they need to master skills at their own pace. At other times, children of different levels can be put in groups where they can learn from each other; the effectiveness of this strategy has been widely recognized in the trend toward cooperative learning and peer tutoring. Social skills grow in a mixed-age group, as children develop attitudes of responsibility and tolerance for those of different capacities. And in classes that stay with the same teacher for more than one year, proponents say, the teacher-student relationship can become so personal that both academic and discipline problems diminish.

The Open Classroom Reborn?

To many teachers who were around in the 1960s and early 1970s, mixed-age groupings sound suspiciously like the "open classrooms" of that era. And, in fact, such groupings only work if certain aspects of the open classroom are incorporated: a flexible use of space that uses "learning stations"; a wide variety of concrete materials available to children as they need them; a teacher's willingness to let children work in small groups rather than lecturing to them en masse; evaluations that record each child's progress through a continuum of skills. But the bugaboos that led many teachers to reject the early open classrooms are by no means ever present in the new mixed-age groupings. Most classrooms have walls, though some open the doors between them. Many teachers work in teams, but just as many classes are self-contained. Some mixed-age groupings take place for as little as an hour of shared time a day; others keep the mixed group together only for certain subjects; and some keep them together all day. The classrooms visited here represent only a few of the ways teachers interested in a developmental, child-centered approach are moving toward mixed-age groups.

Central Park East is one of the few schools whose open classrooms survived the conservative reform wave of the late 1970s and 1980s, and its director, Esther Rosenthal, points to very practical reasons why the earlier trend toward mixed-age groupings failed. Unlike Great Britain's, most American teacher training programs did not teach developmental theories or provide model classrooms to practice them in, she says. By 1975, when a recession began to spark teacher cutbacks in districts across the nation, the newer teachers were the first to go, and many innovative programs died with their departure. The lack of bureaucratic support also made new ways hard for teachers: Everything from required testing to mandatory grade-level textbooks was organized to counter mixed-age principles. Little wonder, she says, that excitement about the idea among educators and researchers dropped dramatically by the mid-1970s. Still, education runs in cycles, she points out. "We are entering a new cycle with a more humanistic style. Pockets remained here and there, and now that movement is a-borning again."

IN MANY elementary schools, for instance, teachers excited by new pedagogies such as the whole-language approach to reading have begun turning to each other for new classroom structures in which these ideas can be carried out. This could mean teaming with another teacher to share ideas and resources—and even if that teacher is at another grade level, it could mean sharing students as well. The whole-language reading approach provides the flexibility to group children at different ability levels together, encouraging them to work with and learn from each other. Whether teaming is part of the picture or not, whole-language instruction can result, then, in a new openness toward mixed-age grouping.

In some schools, the push comes from another direction. At P.S. 41, the change to multi-age groups was regarded as a first step to getting teachers to try out new pedagogies. Once core teams of mixed-age groups were established, says Assistant Principal Gary Wexler, teachers found it both useful and necessary to personalize their classroom instruction. "Nongrading is the only way to *get* teachers to personalize, sometimes," he argues. "Because the only way nongrading can possibly work is to use cooperative learning, peer tutoring, learning centers." For P.S. 41, multi-age grouping is only one method of generating a spirit of enthusiasm and ownership among its teachers; and though the school's program incorporates only some aspects of the multi-age theory, it clearly has succeeded on one level. The school is alive with cooperation and pride; around the lunch tables and in their common planning period, teachers talk continually about new ways to work with their students together.

Which Ages Go Together?

All these models rest on the principle that children do better when they work in small groups with flexible age boundaries—so that their success is measured not against others of the same age, but by their mastery of new skills as they become ready. How best to mix the ages to achieve this goal is another question. Most educators agree that between the ages of five and eight (grades K-3) children proceed through certain key developmental stages—and during this period they learn best by contact with as many sensory, concrete experiences as possible. But should the five-year-olds be put with the older children?

Few of the teachers combining grades 1 and 2 or grades 3 and 4 think so. "For the most part, the five-year-olds still belong in kindergarten with the babies," says Norma Leutzinger. "There's a big difference in what a five-year-old is ready for."

As she approaches six, a child makes a key transition, these teachers agree—not from a concrete mode of learning to a more abstract one (which happens later), but from a more individual way of learning to a group-centered one. Some schools acknowledge this by creating K-1 (or "transition") combinations where a child can comfortably work in both modes. As a child matures socially, he can work together with the class's older children.

Teachers and researchers also disagree about where the third-grader belongs. At the schools described here, most teachers felt strongly that by third grade a child has moved into a new mode of learning that calls for grouping with fourth-graders. Only in the Montessori elementary school was there a commitment to grouping six- to nine-year-olds (first- to third-graders) together in the same class. At Sands Montessori, for funding reasons, kindergarten makes a class of its own with five- and six-year-olds, though Montessori schools normally group three- to six-year-olds together.

"Montessori classes are divided into overlapping age groups [3-6, 6-9, and 9-12 years old]," says Sands principal Sandra Sommer, "to acknowledge the developmental passages that a child goes through around six years old and nine years old." By including six-year-olds both with younger and older children, Montessori acknowledges the "bubble" that includes some sixes with the fives and some with the older children. A similar process occurs at nine, Sommer says, and so narrow grade groupings of grades 1-2 and 3-4 are inappropriate.

"When you take an eight-year-old away from the sixes and sevens, you miss the beauty of the mixed-age experience," agrees Mary Motz. "By the third year in my class, the older child is very sensitive to the younger ones' progress. He can help check their work, for example, and by teaching a younger child he really shows mastery of the material." Children gain socially from the broader three-grade grouping too, she says, and self-esteem goes up. "A bright child in the middle year can go as fast as he wants, but a slow child in the middle isn't isolated as different."

Still, Motz says, teaching three grades in one classroom is unquestionably harder in some ways. She works all day on Saturday, she says, planning the week ahead: what to present to the whole group, which children need attention in which areas. And like all of the mixed-group teachers described here, she keeps meticulous progress records on each child through a combination of methods. Children keep journals that can be used to track their reading, writing, and language skills; and she records their mastery of specific skills in another log.

Discipline, a potential problem that scares off many teachers from combining age groups, seems less of a problem to Motz. In some ways, this is because she knows her students so well; when only a fraction of the class is new to the teacher each year, she has an automatic advantage. In fact, the theory is that mixed-age grouping fosters good discipline because older children take responsibility as leaders and models for the younger ones. Still, this does make work on the teacher's part; all the classrooms described here give a great deal of attention to routines that foster mutual respect and conflict resolution.

SUGGESTIONS FOR SUCCESSFUL MULTI-AGE CLASSROOMS

- Provide plenty of flexible space and divide it into functional areas or "learning centers."
- Supply a selection of concrete materials to foster math concepts and language play. You won't need twenty-five of everything, since most activities will only involve a few children at a time.
- Provide a wide variety of "real books" at every reading level. If you do use reading textbooks, do so only as a check.
- Structure into the day opportunities for older children to tutor younger ones. Pair a youngster at the early edge of acquiring a skill with one who is more confident but still needs practice. Or allow an older student to check a younger one's work.
- Involve students in making work plans or "contracts" on a daily, weekly, or monthly basis.
- Allow children to freely explore the room and to choose their activities individually or in groups.
- Structure the curriculum around themes that can integrate learning across content areas.
- Use plenty of support staff—in art, music, physical education, special needs. Be sure to include them in planning of curriculum themes.
- Don't sort, track, label, or retain kids. Break down the idea that June is "promotion" time. A child can remain in the group until his mastery of appropriate skills shows he is ready to move on.
- Try sharing responsibilities with another teacher if your subject matter expertise lies in different areas.
- Switch teaching assignments frequently in graded schools. This increases empathy and cooperation among teachers, familiarizes them with students of different ages, and helps them think of themselves as learners.
- Train student teachers in many grades, not just one. Include courses in early childhood development in their requirements for certification. ☐

KC

What To Do in Class

In a Montessori classroom, children of different ages learn together for both social and academic reasons. But how do they do it? How does a six-year-old work alongside a nine-year-old without one of them being bewildered and the other bored stiff?

The answer, say Motz and Sommer both, lies in the nature of the Montessori curriculum. It covers math, language, and cultural subjects in a series of concrete tasks—bead games, map puzzles, and the like—that can be taught to a larger group and then practiced again and again, with the teacher in smaller clusters and on one's own, until they are mastered. Motz and her students track their progress using monthly or weekly work plans, lists of activities from which the children can make their own choices. Through this tracking, teachers can help assure that each child is always working at the level he or she is comfortable with, prompted to try new things by curiosity about what is going on around him, and taught the necessary skills as the occasion arises. For a class of twenty-four six- to nine-year-olds, Motz makes up half a dozen such work plans or "contracts" monthly, some of which overlap in the academic areas they address.

Motz argues that the contract approach motivates children to acquire skills on their own, like math facts, that might otherwise be punishing rote routines. "The contract is actually unnecessary for most of the class, except as an aid to me," she confesses. "The children know that if they want to use a certain activity they need to take certain steps before they'll be able to. They have freedom; they're not told what day they have to do anything."

Contracts are also a key part of the IGE system, which organizes learning around a four-step cycle of assessment, selecting objectives, following a learning program, and then re-assessment. Using 9 x 12-inch "task cards" the teacher can record each child's progress in six or seven broadly defined areas (such as "letters"). Teachers use formal assessment methods to place children at the start and then move them ahead based on continuous, informal assessments of their mastery.

DIFFERENT WAYS TO GROUP CHILDREN OF DIFFERENT AGES

One key to the success of a multi-age classroom is a variety of groupings that afford students the opportunity to advance at their own pace, tutor others, and mix with different children. Some types of grouping are:

- **Problem-solving grouping,** in which learners are grouped around a common unsolved topic or problem; for example, a group discussion related to the main idea of a story.
- **Needs-requirement grouping,** in which students are instructed in a concept, skill, or value; for example, extra instruction in consonant blends.
- **Reinforcement grouping,** for learners who need more work in a specific area or task.
- **Interest grouping,** for learners who want, say, to read poetry out loud.
- **Learning-style grouping,** for those with a common pattern of learning, such as through manipulation of objects.

Adapted from Language Arts Handbook for Primary-Grade Teachers in Multi-Graded Classrooms, *Winnipeg: Manitoba, Department of Education, Canada, 1988.*

The Integrated Curriculum

Whatever their formal construct or rationale for teaching mixed-age groups, most teachers use another powerful classroom technique to pull together their learning objectives. Each year they select a theme—whales, for example, or "workers in the neighborhood," or "families from long ago"—and organize every aspect of the curriculum around it. Children practice language skills as they read about the theme and write about it; they measure and graph its component parts using math and science skills. Social studies material like history and geography is all tied in; and the whole class takes field trips together around the theme, practicing social skills along the way. In a class that stays with the same teacher from year to year, the theme shifts yearly; so teachers must plan on at least a two-year cycle.

Integrating a curriculum around a theme allows children of different ages and stages to work together in a group as well as to practice skills at different levels. "I might read an oversized picture book to the whole class," says Norma Leutzinger. "The older kids and early readers will be following the text, and the younger ones will get something from the pictures and the discussion, as well as from being read to aloud." Working together on a theme-related project, an eight-year-old may write down a story dictated by a six-year-old, type it, and bind it into a book illustrated by the nonreader, then give it back to the nonreader, who can use it to practice reading his own work.

The challenge of moving toward a mixed-age grouping can seem formidable when all the standard classroom materials are geared toward single-grade content areas. But in practice, say the teachers who do it, having to come up with theme-related activities and materials is a powerful spur to trying new ways of teaching. Because the children are still at a developmental age at which learning must be largely organized around concrete objects, useful learning materials can be as ordinary as bottle caps, bread tags, and popsicle sticks; and their collection can involve parents in the life of the classroom, too. And teachers learn from each other, sharing ideas as well as materials, planning together, and scheduling joint class activities. P.S. 41 encourages its teachers to visit other schools committed to mixed-age classes, like the model school at Bank Street College of Education.

Another good source of support, ironically, is the guidebook published by the Canadian province of Manitoba for teachers in small rural schools where mixed-age grouping is more necessity than choice. A down-to-earth manual crammed with ideas for themes, schedules, record-keeping and assessment, and dozens of other subjects, it is useful for long-range and short-term planning both. (For ordering information, call EDRS at 800-227-3742 and ask for ED300814.)

(Continued on page 39)

MULTI-AGE CLASSROOM

(Continued from page 32)

Who Most Benefits?

Do children in mixed-age groupings do better in the long run than those in single-age classes? Some categories of students do, some don't; but none seem to fare worse in mixed-age classes. The research on this question is somewhat inconclusive, partly because just what defines a "nongraded primary classroom" is often not clearly spelled out. Still, study results generally show a pattern of improved language skills among mixed-group students; in other academic areas, tests either favor mixed-age or show no difference. Nobody falls behind, these measures show; although those students on developmental and academic extremes benefit most—boys, blacks, the slow and the gifted, and children with low self-esteem. Some researchers report that such grouping is particularly effective for bright but immature children, who need both academic stimulation and a social environment more suited to a younger child. Others have shown that the longer children stay in nongraded classes the more their achievement scores rise in relation to their ability.

Most of the available research measuring these results is fairly old; but more recent research on how children learn tends to support the mixed-age structure as well. For example, children have been shown to adjust their language from an early age depending on who their audience is—so in a mixed-age class, a younger child could be stimulated to rise to the older children's level. Researchers have shown that in social situations, children spontaneously tend to choose mixed-age situations over same-age ones, lending weight to the argument that such arrangements foster social development. And peer tutoring has been shown to be a particularly effective learning technique between students of different ages—especially if the "novice" is already within a certain key range of the "expert" in her grasp of the topic. Finally, mixed-age groupings make it virtually impossible for a teacher to lecture on the same material to a large group, and research clearly shows that the more personal and individual the lesson, the more effective it is.

So Why Not?

Given all these advantages to mixed-age grouping, why are more schools not doing it? The most conservative answer is that such classes are not necessarily best for every student. Even the National Association for the Education of Young Children (NAEYC), whose 1988 position statement strongly advocates "developmentally appropriate" child-centered practice in the primary grades, recommends family groupings as only one of the desirable ways to achieve this. Classroom groups should vary in composition, the NAEYC says, depending on children's needs, and children should be placed where it is expected they will do best— "which may be in a family grouping and which is more likely to be determined by developmental than chronological age."

Some teachers shy away from mixed-age grouping at first, for understandable reasons. For one thing, over the last twenty years teachers have often been assigned to such classrooms simply to accommodate population overflows, not for pedagogical reasons—and so this has become the least-desirable assignment in the school, involving as it does two entirely separate preparations every day. The solution, say advocates, is to combine the class for many subjects and to adapt one's teaching style to a more individualized approach, rather than lecturing to two "classes" who vary considerably within themselves in any case.

The team teaching that often inspires mixed-age grouping can be difficult for some teachers. "You have to be realistic about the interpersonal stuff," says CPE director Esther Rosenthal. "With collaborative work, you have to be constantly talking about what you're doing, and it gets to be a strain." Other teachers who have teamed up agree that the right match of chemistry and teaching styles can make all the difference in how it works.

Teachers who are not trained to work with different ages at once may object to the idea. Few education schools offer courses that directly support this, and few open classrooms exist for practice teachers to learn in. As an interim step, therefore, some principals re-assign teachers annually to different grades until they are comfortable enough with several levels to combine them easily.

Until elementary teachers must study early childhood education before they work with the early grades—something that is required in Great Britain, and that NAEYC recommends—the skills to run a developmentally based mixed-age program may be lacking. So far, the U.S. educational establishment has simply not supported the development of mixed-age elementary teaching.

The bureaucracy of a central testing system also gets in the way of teachers trying out new ways. "To do this, you've got to trust yourself to introduce skills in your own way," says Norma Leutzinger. Though test results eventually prove that it works, she says, it takes a lot of confidence to change a traditional system.

Finally, a powerful system of textbook publishing that serves mainly single-grade classes impedes progress toward a more developmental approach. In the "scope and sequence" curriculum models of the last decade, children at every grade level were trained in carefully delineated subject areas before they moved on to the next grade. Mixing classes together, even if only for selected subjects, messes up that system. If it is to work, publishers will have to adapt—as they are beginning to already, prodded by the whole-language movement.

In the end, change may come bit by bit, as teachers find ways to team with each other comfortably, to give up absolute control at the head of the class, and to support new teachers on unfamiliar ground. The rewards are many, according to those who do it. "It's a whole different dimension," says Norma Leutzinger, "and it changes you. It's wonderful, but draining—just as intense as having a family. But then you see kids leave you, at the end of your two years together, with the confidence to stand up in front of the class and speak about something. And you see them come back, year after year, they visit your class, you read to them, and you play with them on the playground. I wouldn't do it any other way for the world." □

LORRIE A. SHEPARD AND MARY LEE SMITH

Synthesis of Research on School Readiness and Kindergarten Retention

There will *always* be a group of youngest children who lag somewhat behind their kindergarten and first grade classmates; the problem is relative. Before we create a plethora of new programs, we need to think twice about trying to "solve" a problem that is invariably cured by the passage of time.

Photograph courtesy of [illegible]

Every September in the United States more than three million children begin formal schooling with their first day of kindergarten. These children differ tremendously in their readiness to learn and their ability to follow directions. Many of the youngest children—those who just made the entrance-age cutoff date—seem barely ready to meet the expectations of school.

Great diversity in cognitive development and social maturity creates a teaching problem that educators are constantly trying to resolve. Should the school district change its entrance-age policy to remove the youngest children? Can these apparent differences in readiness be assessed and used to decide who should be in school and who should not? If schools are obliged to admit all students, should children who remain unready for first grade be kept in kindergarten or special transition programs for an extra year?

Current educational reforms and the desire to raise standards have intensified the problems of differential readiness. Third grade exit requirements are translated into uniform expectations for second graders, which in turn dictate absolute standards for first graders and then kindergartners. At both the state and local level, many policymakers are

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contemplating testing programs to determine who is prepared to begin and to leave kindergarten.

Several bodies of research inform these issues of entrance age, school readiness, and early-grades retention. In some cases common-sense impressions about what works are at odds with the accumulated evidence. What follows is a summary of relevant research and policy implications.

The Problem of Being Youngest

Numerous researchers and reviewers have addressed the question of within-grade age effects, especially for first grade. When the children who are youngest in their grade are compared with their older classmates, they are nearly always less successful (Beattie 1970, Bigelow 1934, Carroll 1963, Davis et al. 1980, Green and Simmons 1962, Hall 1963, Halliwell and Stein 1964, Kalk et al. 1981, King 1955). However, the achievement differences that are "statistically significant" in these studies are not necessarily very large. For example, based on sample sizes of 8,500 per grade, Davis, Trimble, and Vincent (1980) found that children who were fully six years old when they entered first grade were nine percentile points ahead of children who were only five when they started first grade.

Similarly, we also found that first graders who were in the youngest three months of their class scored on average at the 62d percentile in reading compared to the oldest three-month children who were at the 71st percentile (Shepard and Smith 1985). (In math, the difference was only 6 percentile points.) Thus, a major point to be made when we are considering practical rather than statistical significance is that achievement differences between the oldest and youngest first graders are small, on the order of 7 or 8 percentile points.

We further analyzed the age trend in first grade by ability strata (Shepard and Smith 1985). There was virtually no difference in achievement between the oldest and youngest age groups for children who were above the 75th or 50th percentile points of their respective age intervals. The overall age trend seemed to come almost entirely from the children who were below the 25th percentile of their respective age groups. Although one would not wish to draw any policy conclusions based on only one study, it should be noted that the disadvantage of achievement experienced by some younger children in relation to older classmates may more likely be a *combination* of youngness and low ability.

A second major point, looking over a number of research studies, is that even the small disadvantage of youngness eventually disappears, usually by about third grade. From analyses based on National Assessment data, Langer, Kalk, and Searls (1984) noted that the effects of being old or young in grade tended to diminish as grade level increased. For Halliwell and Stein (1964) to find achievement differences between the oldest and youngest fifth graders is the exception among research studies rather than the rule. In our own research, we found no difference in math achievement or in reading achievement between the oldest and youngest children in either the third or fourth grade (Shepard and Smith 1985). Miller and Norris (1967) found that a difference between the oldest and youngest children on readiness measures was no longer apparent at the end of second, third, or fourth grades.

"A major point to be made when we are considering practical rather than statistical significance is that achievement differences between the oldest and youngest first graders are small, on the order of 7 or 8 percentile points."

They attributed the lack of differences due to age to the effectiveness of an ungraded program in *individualizing* reading instruction. Their observation about individualization may have wider import. In reviewing the literature on age effects, Weinstein (1968–69) proposed that whether an initial deficit for young first graders would persist into higher grades depended on the attitudes and expectations of teachers in responding to the ability range of normal first graders.

A few studies have contributed greatly to the impression that the problem of being youngest is grave and potentially devastating. These studies note that children who are youngest in their class are more likely to repeat a grade (Langer et al. 1984, Uphoff 1985), to be referred to special education (DiPasquale et al. 1980), and to be labeled as learning disabled (Diamond 1983, Maddux 1980).

Gredler (1980) urged caution, however, in the interpretation of these later indicators since they are more susceptible to teacher biases than are achievement tests. Referral rates and retention decisions are influenced by the opinions of teachers who might either expect young children to have difficulty or decide not to retain a child who is already older. We conducted a study to see whether kindergarten teachers consider such factors as a child's age when they form judgments about the likelihood of success in first grade or the desirability of retention (Shepard and Smith 1985). In a policy-capturing experiment, 68 percent of kindergarten teachers gave some important weight to age in their recommendations for retention or promotion (with sex, physical size, social maturity, and academic skills held constant). In practice this means that a child lagging behind at the end of kindergarten might be recommended to repeat kindergarten if he were five years and nine months old. But a child with equally deficient skills who was already six years and eight months old would be passed to first grade. Clearly if teachers are more willing to hold back younger children, retention data cannot be used to evaluate the effect of youngness.

Current research in special education is also consistent with the interpretation that higher referral rates for

> **"When the children who are youngest in their grade are compared with their older classmates, they are nearly always less successful. However, the achievement differences are not necessarily very large."**

Highlights of Research on School Readiness and Kindergarten Retention

On being youngest. Children who are youngest in their first grade class have slightly lower achievement rates, but the difference is only 7 to 8 percentile points, and disappears by about third grade. Schools should reexamine their referral and retention practices if they find that the majority of targeted students are the youngest in each grade. Unwarranted referral or retention may have negative effects later on.

On entrance-age policy. Kindergarten entrance age has increased gradually over the past 30 years. A child who was among the older students in class in 1958 would today be one of the youngest. In most states children have to be five years old before 1 October to start kindergarten. Regardless of the entrance age requirement, however, the youngest children are *always* at a slight disadvantage. Thus, raising the entrance age is a temporary solution to a problem that is relative rather than absolute.

On voluntarily waiting a year to start school. Many parents are choosing to keep their children out of school an extra year so that when they do start school, these children will be in the less at-risk group of older students. These children may, however, eventually be insufficiently challenged. Furthermore, schools should not encourage parents to keep their children home because this policy invariably increases students' age differential in kindergarten and first grade.

On assessing children's readiness for school. Many of the tests being used to place and evaluate children were designed for other purposes, such as helping teachers plan instruction. None of the available tests is accurate enough to screen children into special programs without a 50 percent error rate.

On kindergarten and first grade retention. By the time they complete first grade, children who have repeated kindergarten do not out-perform comparison students; they do, however, have slightly more negative feelings about school. There is no achievement benefit in retaining a child in kindergarten or first grade and, regardless of how well the extra year is presented to the child, the child still pays an emotional cost.

younger children within a grade can be explained by teacher expectations and the slightly lower average achievement of the youngest children. Pugach (1985) found that children are placed in special education in mildly handicapped categories largely on the basis of teachers' referrals, and that teachers have in mind a need for one-to-one instruction or other remedial services rather than a scientific conception of handicap. In a study of learning disabled children, we found that only 43 percent were validly identified; the majority of children labeled LD had other learning needs, from very serious to extremely mild, which were generally served by additional instruction once the child was placed in special education (Shepard and Smith 1981, 1983). Given the widely acknowledged fallibility of the LD label, there is no reason to believe that children who are youngest in their grade develop real handicaps. There is, however, genuine cause for alarm that schools are so willing to affix a handicapped label to a child who is slightly behind in achievement.

In summary, the "age effect" literature does verify that children who are youngest in their first grade class are at a slight disadvantage. This is hardly surprising since an 11-month period of growth and development is a significant portion of a lifetime for six-year-olds. However, the difference between oldest and youngest children is smaller than popularly believed, only about 7 or 8 percentile points on achievement tests. Furthermore, most studies show that the age effect disappears by about third grade. Whether and how soon the age effect disappears depends on the responsiveness of the school program to individual differences. Differential referral and retention rates for children who were the youngest when they entered school are not valid indicators of the youngness problem because they are contaminated by teacher beliefs about age. However, the increased probability for younger children to be held back or placed in special education should be of concern in and of itself because these actions may have negative consequences greater than the slight achievement disadvantage that prompted them. (See reviews by Holmes and Matthews 1984, regarding the negative social-emotional effects of nonpromotion, and by MacMillan and Meyers 1979 on the elusive phenomenon of special education stigma.)

Entrance-Age Policy

Over the past 30 years the national trend has been slowly but surely to raise the age for entrance to kindergarten. In 1958 most states required kindergartners to be five years old by December 1 or January 1 (Educational Research Service 1958). Surveys of school districts in 1963 and 1968 reported that when the entrance age was changed, it was nearly always raised, requiring that children be a month or two older to start school (Educational Research Service 1963, 1968). In 1968 the dominant policy was a date after November 30, but 25 percent of the schools had moved to September or October 1 dates. By 1975 the percentage with September or October 1 cutoffs had increased to 35 percent (Educational Research Service 1975), although admission dates after November 30 remained the most prevalent district practice.

In 1985 a survey of states (rather than districts) revealed an even more substantial shift in policy. Now the dominant practice is to require that children be five before October 1 to start kindergarten; only 20 percent of the states (mostly in the northeast) have entrance cutoffs after November 30 (Education Commission of the States 1985). Missouri has elected to raise its entrance age a month each year so that in 1987 children must be five by July 1. In Colorado several local districts have also adopted June or July cutoffs (Management Information Services 1982). These continuations of the long-term trend into summer dates suggest that national entrance policies will not necessarily stabilize once they accommodate to the September rather than mid-year norm. Earlier and earlier cutoff dates have raised the average age of kindergartners. A child who might have been in the older half of the class in 1958 might now be one of the youngest children in some kindergarten classes.

Rhetoric surrounding decisions to raise the school entrance age has focused almost entirely on the unreadiness of the youngest children. Will moving the entrance age solve the problem of youngness? If children must be fully five before the start of kindergarten, will short-term and potentially long-term learning problems be prevented? Obviously many policymakers believe so. But for entrance-age change to be the solution, the youngness dilemma must be an absolute problem rather than a relative one. In other words, the cognitive and social demands of kindergarten must be fixed in such a way that they are consistent with what five-and-a-half-year-olds can do but are too much for children who are just barely five. Advocates seeking to raise the entrance age construe the problem in this way. All of the research evidence, however, offers a convincing case that the youngness problem is relative, not absolute.

The youngest children are at a disadvantage whether they enter school at 4.7 years of age in a district with a February cutoff, at 4.9 in a district with a December entrance age, or 5.0 in a district where September 1 is the deadline. Several authors have pointed out the absurdity of seeking an "optimal" age for first grade readiness if the children who are the "successful" group in one context are the "young-unsuccessful" group in another district only because of their relative age in comparison to their respective classmates (Gredler 1975, Weinstein 1968–69).

The relative nature of the age effect is also seen between countries. The

Photograph courtesy of Christine [illegible]

Is it possible to assess readiness directly? A school superintendent or state legislator should remember one overriding rule for determining test validity: validity depends on how a test is used.

"A second major point, looking over a number of research studies, is that even the small disadvantage of youngness eventually disappears, usually by about third grade."

International Study of Achievement in Mathematics (Husén 1967) found that "children with birthdays toward the end of the school year tend to do less well in all countries" (p. 228). This was true in England where the mandatory age of school entry was five and in Finland and Sweden where compulsory attendance does not begin until age seven. To contest the idea that older entrance ages would be a panacea for differential readiness, Gredler (1975, 1980) cited several studies including those by Malmquist (1958) and Jinks (1964). Speaking of younger seven-year-olds in Sweden, Malmquist lamented that large differences in intellectual development made it impossible for the same method of teaching to be effective with all the pupils. In a British study, Jinks (1964) again found that teachers praised the learning abilities of their *older* pupils, who would have been the *youngest* children in the United States.

Because the youngness problem is relative, raising the entrance age would provide only a temporary solution to the perceived problem. In a district with a September 1 cutoff, children with summer birthdays are deficient compared to their classmates. If the district responds by adopting a July 1 cut-off, in a short time normative comparisons will readjust and children with May and June birthdays will be at risk.

Individual Decisions vs. School Policy

States and local districts cannot solve the youngness problem by raising the entrance age because they would merely create a new youngest group. But should parents individually consider holding out of school a child who is just past the cutoff? Many parents have obviously already made this decision since there are significantly fewer children in the first month past the cutoff than in any other month (Shepard and Smith 1985). Very likely, parents believe that by waiting a year their child will have the benefit of being the oldest in the class. There are no controlled studies available on this older age group. Advocates who advise parents to keep their children at home another year cite the youngness research summarized here; they claim only good and no ill effects could come from this practice (*A Gift of Time* 1982). In the absence of evidence, however, greater caution might be advisable. Anecdotally, we know that children who are over-age for their grade are very aware of being older (Shepard and Smith 1985), but the attitudinal effects of being oldest or different have not been studied systematically. Parents should at least consider the possibility of too little challenge as well as too much challenge. Longer-term problems that we know about from the retention literature might also be considered, such as a girl reaching puberty in fourth grade or a 19-year-old young man being unwilling to finish high school.

Even if there is little research evidence about what parents should do, there is a firmer basis for saying what districts should do. Districts should *not* encourage parents to keep their young five-year-olds at home. If a district or school gives this kind of advice, the result will very likely be an increase in the heterogeneity of kindergarten and first grade classrooms because middle-class parents are more likely to follow the advice. Just as "Sesame Street" widened the gap between middle-class and poor children (Cook et al. 1975), middle-class families will be more able to know about and take advantage of this educational wisdom. In our study of kindergarten retention, many lower socioeconomic families resisted an extra year of (half-day) kindergarten specifically because mothers could not afford to stay home or to pay for preschool (Shepard and Smith 1985). In one school where the youngest children were systematically asked to repeat kindergarten, all the parents of children with the highest readiness skills agreed and the parents of children with the lowest skills refused. As a consequence, the diversity of the first grade class was dramatically increased the following year.

Thus, school districts should not foster a hidden policy of encouraging parents to keep their young five-year-olds at home; the parents who are most likely to heed this advice do not necessarily have the least ready children. Teaching problems associated with great diversity in kindergartens will increase, not diminish.

Assessing Readiness

If a uniform entrance age cannot address the problem of differential readiness, is it possible to measure readiness directly? Can a test be used to decide who should stay out of school or who should be placed in a less-demanding kindergarten program? Numerous school readiness or screening instruments exist. Many are intended specifically to assess reading readiness, but others include a broader array of social and developmental skills relevant to a child's adjustment in school.

What should a school superintendent or state legislator—who is not interested in psychometric properties or validity coefficients—know about school readiness measures? First, there is one overriding rule for determining test validity: validity depends on how a test is used. In the case of school readiness measures, this means that some tests might be perfectly good for teachers to use in making day-to-day instructional decisions but would not be good enough (technically or in a court of law) to be used to place a child in a special school program. The more crucial the decision for an individual child, the greater are the demands for test validity evidence and due process.

"The 'age effect' literature verifies that children who are youngest in their first grade class are at a slight disadvantage . . . hardly surprising since an 11-month period of growth and development is a significant portion of a lifetime for six-year-olds."

Scientific knowledge underlying readiness assessment is such that none of the existing tests is sufficiently accurate to justify removing children from their normal peer group and placing them in special two-year programs. In part the lack of high correlations with later school success is caused by the instability of the very traits we are seeking to measure. Four- and five-year-olds experience developmental bursts and inconsistencies that defy normative charts. In addition, the cognitive domains that can be sampled at younger ages are only moderately related to the cognitive skills demanded later by reading and other academic tasks.

Let us consider two very popular readiness batteries, the Gesell School Readiness Tests and the Metropolitan Readiness Tests. The Gesell purports to measure developmental age and is recommended by its authors for screening children into developmental or two-year kindergarten programs. Numerous reviewers have stated that the Gesell tests do not meet the standards of the American Psychological Association for validity, reliability, or normative information (e.g., Kaufman 1985, Shepard and Smith 1985), yet the tests are used in hundreds of school districts to make placement decisions. Only one study has ever been done reporting a reliability coefficient for the Gesell (Kaufman and Kaufman 1972); in that study the error of measurement was so large that a four-and-one-half developmental age score could not be reliably distinguished from a five-year-old score, but this is precisely the difference that is used to decide who should start kindergarten and who should not. One study was undertaken to evaluate the predictive validity of the Gesell (Wood et al. 1984). Although the test has what sounds like a creditable agreement rate with teacher judgments (78 percent), in fact, when the children identified as "potential kindergarten failures" were examined, only *half* were accurately identified. For every potential failure accurately identified there was a successful child falsely identified. This problem of predictive inaccuracy is not unique to the Gesell but occurs with all of the readiness measures because they have moderately good but not very high predictive validities.

"A British study found that teachers praised the learning abilities of their *older* pupils, who would have been the *youngest* children in the United States."

In an extended review of the technical properties of the Gesell tests, we found that they "lack discriminant validity from IQ tests" (Shepard and Smith 1985). Although the Gesell tests claim to measure developmental age, they essentially measure the same thing that IQ tests measure (Jensen 1969, 1980). Changing the name of what the test measures has profound policy implications. Many decision makers would be willing to hold out of school or place in a two-year track children who are "developmentally young." It is much less defensible to hold out of school children who are below average in IQ, especially since a disproportionate share of these children will come from low socioeconomic backgrounds.

The Metropolitan Readiness Tests are among the technically best measures available (Ravitch 1985). The Metropolitan is not advertised, however, for the purpose of sorting children into ready and unready groups. Rather it is intended to help teachers organize instruction. For example, a kindergarten teacher might plan different activities for children who are ready to learn letter sounds than for children

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"School districts should not encourage parents to keep their young five-year-olds at home; parents who are most likely to heed this advice do not necessarily have the least ready children."

who cannot make auditory discriminations. If the Metropolitan were to be used to place children in special two-year programs, it would fare slightly better than the Gesell, since its predictive correlations are higher, but would still produce many identification errors.

The fact that screening programs will misidentify many children raises the question of whether it is better to catch unready children even if many of those identified will be falsely labeled. The answer depends on the benefit (or harm) of the special placement. A similar lesson was learned in the field of special education. The National Academy Panel on Selection and Placement of Students in Programs for the Mentally Retarded noted that if special education were unambiguously a benefit, there would be no dispute over the validity of identification and placement procedures (Heller et al. 1982). The validity of readiness tests is entwined with the validity or effectiveness of special programs.

It is not possible, then, to make highly accurate assessments of school readiness. Most test publishers are careful about the claims they make for their tests, suggesting that they be used to help teachers plan instruction. If children are classified into ready and unready groups on the basis of a test, a number of identification errors will occur. How school systems should proceed knowing that readiness measures are fallible depends on the benefit of special programs.

Providing an Extra Year for Unready Children

Several options have been proposed whereby schools can provide an extra year for children who are not yet ready for the demands of first grade. In addition to the possibility of keeping children at home, the Gesell Institute has suggested that developmentally young children can attend a developmental or prekindergarten, repeat kindergarten, or attend a pre-first grade class between kindergarten and first grade (*A Gift of Time* 1982). Proponents of these alternatives argue that time itself is the best cure for the problem of differential readiness. Donofrio (1977) urged that these "unfavored" children be allowed to "mark time" until they are in step psychologically with their "behavioral and maturational peers" (p. 351).

Extra-year programs are effectively like repeating kindergarten even when the curriculum is altered from one year to the next. Certainly, parents who are asked to agree to these placements struggle with the implications of "retention" regardless of whether they accept the arguments for the program (Shepard and Smith 1985). One might look to the extensive research literature on nonpromotion or grade retention to evaluate extra-year programs. The majority of parents and educators believe that grade repetition is an effective solution for academic failure and social immaturity (Byrnes and Yamamoto 1984). Yet research findings are almost uniformly negative. When retained children were compared to equally low achievers who were promoted, the socially promoted pupils were consistently ahead on both achievement and social-emotional measures (Holmes and Matthews 1984, Rose et al. 1983). Contrary to popular beliefs, repeating a grade does *not* help students gain ground academically and has a negative impact on social adjustment and self-esteem. Ironically, reviewers have also found that the practice of holding children back does not increase the homogeneity of classrooms (Bossing and Brien 1979, Haddad 1979).

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"Providing an extra year before first grade does not solve the problems it was intended to solve. Children in these programs show virtually no academic advantage over equally at-risk children who have not had the extra year."

Advocates of kindergarten retention are likely to dismiss the negative findings of nonpromotion research because an extra year of kindergarten is intended to prevent failure before it occurs. Many fewer studies are available on pre-first grade or prekindergarten programs. Gredler (1984) located five recent studies evaluating "transition" or pre-first grade classes. In only one of these studies (Raygor 1972) was there a benefit or achievement gain for children in the transition program. In four studies the transition-room children were no better off after an extra year than the "potential first grade failures" who were placed in the regular first grade. Bell (1972) found that transition-room children had lower self-esteem and lower self-confidence than the at-risk children who were not retained. In Raygor's study the initial benefit washed out by third grade.

May and Welch (1984) conducted a study in a school district where children were placed on the basis of the Gesell Screening Test. Children who were identified as developmentally immature were recommended to "buy a year" and spend an extra year before second grade. If their parents refused the recommendation, immature children were classified as "overplaced" and continued in the traditional grade sequence. The state achievement test at the end of third grade showed no differences between the overplaced and buy-a-year group. On the Stanford Achievement Tests given at the end of second, fourth, and sixth grades, there were likewise no differences between the two groups, one of which had had an extra year of school. More importantly, on the Stanford there were also no differences between the at-risk groups and the rest of the school district population. Thus, May and Welch concluded that the overplaced children were not suffering the learning difficulties predicted by Gesell theory, and there was no academic benefit from the buy-a-year placement.

In our study of two-year kindergarten programs, we compared children with an extra year to equally at-risk children who did not repeat (Shepard and Smith 1985). At the end of first grade the children who had repeated kindergarten were one month ahead on a standardized reading test. There were no differences between the two groups on a math achievement test nor on teacher ratings of reading and math achievement, social maturity, learner self-concept, or attention. Parents of the two groups rated their children the same in first grade progress and relationships with peers; children who spent an extra year in kindergarten had slightly worse attitudes toward school.

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> **"Children come to school with enormously different interests, aptitudes, and background experiences. They cannot be made to adapt to a uniform curriculum."**

Despite the promises, providing an extra year before first grade does not solve the problems it was intended to solve. Children in these programs show virtually no academic advantage over equally at-risk children who have not had the extra year. Furthermore, there is often an emotional cost associated with staying back, even when parents and teachers are very enlightened about presenting the decision to the child (Shepard and Smith 1985).

Policy Conclusions

Children come to school with enormously different interests, aptitudes, and background experiences. They cannot be made to adapt to a uniform curriculum. The policy options, which common sense suggests, are consistently rejected by research findings. Changing the entrance age will not correct the problems of the youngest first graders because a new youngest group emerges. Children cannot be selected to stay at home or attend a two-year kindergarten on the basis of a test, because the tests are not accurate enough: too many children would be falsely diagnosed as "unready." Extra-year programs have not boosted achievement and, contrary to expectation, have hurt rather than helped self-esteem. Therefore, school districts must think again before screening children into unsuccessful programs on the basis of fallible tests.

There are other alternative solutions to the unreadiness problem but they are not so popular as simple answers—a new date, a new test, or a new grade level. As they so often do, workable solutions will depend on teachers rather than policymakers and on programs that respond to children's individual differences in readiness. In one study of extra-year programs, the biggest gains were not for the extra-year children but for the at-risk children who received extra help in the regular classroom (Leinhardt 1980). It is necessary as well to try to keep the youngness problem in perspective. The disadvantage of the youngest first graders is small, after all, only about 7 or 8 percentile points. And unless it is cast in stone by a learning disability label or grade retention, in most cases it will disappear entirely by the third grade ☐

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Lorrie A. Shepard is Professor, School of Education, University of Colorado at Bolder, Campus Box 249, Boulder, CO 80309. **Mary Lee Smith** is Professor, College of Education, Arizona State University, Tempe, AZ 85287.

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Can we learn anything of value from this richly experienced expert teacher's thoughts and findings?

The First 30 Years Were the Fairest: Notes from the Kindergarten and Ungraded Primary (K–1–2)

Donna Reid Connell

Exactly 30 years ago, in 1957, the Soviets blasted the first successful manmade satellite—Sputnik—into outer space. A panicked American public pointed an accusing finger at the schools for letting our country "fall behind" in the space race. (Someone quipped, I read, I've forgotten who, that Sputnik's significance was only that Russia's German scientist was a day or two ahead of America's German scientist.) Schools responded to the severe and somewhat hysterical criticism by making curriculum more difficult. Content was moved down, year by year, grade by grade. This change in the primary grades has, for the past 30 years, remained permanent.

Donna Reid Connell, Ed.D., *is currently an independent preschool/primary reading/writing consultant. She has authored curricular materials put out by several major publishers. Dr. Connell has been an Early Childhood Education Consultant for the California State Department of Education; a school district Reading Specialist, Head Start Director, and kindergarten teacher; and director of a parent cooperative nursery school, and, for 5 years, Teacher-In-Charge of the Napa Valley, California Unified School District's Ungraded Primary School.*

Within 5 years after Sputnik, the entire second grade curriculum had been moved into first grade. Children at this grade level (not necessarily at this *developmental* level, of course) were then expected to learn in 1 year what had formerly been taught in 2. The records show that during the past 30 years not a few children have failed to thrive with these sharply higher, and often inappropriate, expectations. Potentially eager little learners have floundered and "failed" first grade!

Many ways to ease the pain have been tried

It has become increasingly common in the last few years for sophisticated parents who are aware of how inappropriately difficult the first-grade curriculum is to keep their children *home* an extra year. These parents enroll their children in kindergarten 1 year later than their school district's starting age policy permits, so that the children will be a year older when they reach first grade. Thus, the parents hope, the children will be better able to cope.

The kindergarten and first grade as they were during the 30 years between the 1920s and the 1950s—during which period education for young children became more child-centered than it was before the progressives, or has been since the push for "back to basics"—seem to many educated parents and to many educators to have been more fair to children than are the super-pressure programs we have seen more and more of during this most *recent* 30 years.

Humane educators have tried various ways of coping with the casualties of a too-difficult curriculum. Better yet, various ways of preventing bewildered young children from "failing" have been invented.

Some school districts have added an extra year after kindergarten, with a name such as *senior kinder-*

Fun and games isn't always the frosting on the cake—sometimes it's the cake.

garten, transition, or *transitional first.*

Some school districts have spotted children very early who look likely to "fail" first grade, and have added for them a year *before* kindergarten—*junior kindergarten, developmental kindergarten,* or *preK.*

Some school boards refuse to assume the expense of an extra school year for children identified as *needing* something extra, so label them *learning handicapped,* which makes the district eligible for additional state or federal funding. If young or immature children (or children lacking the kinds of experiences, especially language- and print-rich experiences, that correlate with school success) are *called* ung or immature children, they are not eligible for special aid, and their district itself must foot the bill for a year of enrichment. School districts almost always perceive themselves as short of funds, hence the intentional mislabeling of young learners to make their school systems eligible for aid. The intent is to help the children.

The majority of our nation's schools have provided some measure of relief for struggling first graders by moving part of the double whammy curriculum down to the kindergarten, especially reading and writing upper- and lower-case letters, beginning phonics, forming and reading numerals, reading number words, and some number tasks.

Too often today's kindergarten teachers are issued, against their better judgment, the workbooks to go with a specific K–6 or K–8 program adopted by their school or district. Elementary principals sometimes pride themselves on their "articulated" curriculum. This means using the same publisher's wares throughout the school. Often the kindergarten component of these K–6 or K–8 programs has been developed by individuals with little or no current teaching experience in today's kindergartens. (This can be checked by researching the credentials of the listed authors.) The results are often watered-down first grade tasks, only with more cutesy pictures and larger print for younger children.

Textbook publishers are not helping

Educational publishers, naturally eager to profit, are as eager to profit from this trend as any other, so have produced more and more workbooks and ditto master books to help usually well-meaning teachers help usually agreeable kindergartners learn that which is of secondary importance for them to learn anyway.

Learning letters and numbers through seemingly endless paper-and-pencil skill drills is of secondary importance for 5-year-olds because there are things of far greater importance for them to learn. It isn't that kindergartners can't learn letters and numbers—most of them can and do, though nationally a large percentage don't, and "fail" kindergarten. We wonder just exactly how this teaches *love of learning,* a major curriculum goal in the early years.

For 5-year-olds, it is of far greater importance to share a rich variety of experiences—play; discovery science projects; music, art, and wonderful stories; lively activity-oriented social studies units; frequent outings and small trips; cooperative ventures; and sharing toys, materials, news, and views—all of which should include discussion, discussion, discussion; all of which can involve verbal and written plans, lists, labels, recipes, experience charts, individual stories, and so forth. There is no end to the lengths a conscientious kindergarten teacher can go to with this. It is not even necessary to be creative, only to extend everything a child is doing in every possible sensible and meaningful direction and get it written down for her to see, for him to hear you read.

One of the most significant activities for developing the foundations of literacy in the early years is drawing. A 1981 study of dyslexics at Harvard Medical School revealed a consistent brain pattern for those individuals (McKean, 1981). The study showed evidence of inactivity in the part of the brain that helps plan complicated motor activities. Would time set aside in kindergarten for daily drawing help activate this area of the brain for future writing?

Drawing also builds visual imagery for la reading comprehension. As an *expressive* activity, drawing balances the many *receptive* activities imposed by many current kindergarten curricula.

What is the function of the kindergarten?

During the 30 years before Sputnik, one of the main purposes of kindergartens was to provide young children's first group experiences outside the home. Children were made to feel comfortable and confident in school, competent. Conversation was welcome. Children were shown how to tie shoes; remove and get into jackets; recognize their names; memorize their addresses and telephone numbers; take turns; line up; listen to stories; and sit on the floor in a circle, legs folded Indian style. The best kin-

Don't change the kindergarten entrance age, change the entire K–2 system!

dergartens resembled the model described in this journal (pages 12–19) in the article entitled "The Function of the Kindergarten." Regardless of the degree of excellence of the particular kindergarten class, few children failed.

It was taboo during these decades to expose kindergarten children to print. It was supposedly bad for their developing eyes to do so, a strain on their eyes. (In the 80s we don't seem to mind at all "straining their eyes," pencil-steering hands, and tolerance for frustration.) There are times when good educators should ignore nonsense, at whichever end of the pendulum swing it occurs, and, within reason, stick to their convictions. Therefore, I once put signs, *BOYS* and *GIRLS*, on the bathroom doors in my kindergarten. One afternoon after school, my principal entered the room and pointed out these offending signs to a supervisor who accompanied her. The signs were ripped down. Before morning I replaced them with pictures of a boy and a girl. The following day a little boy pointed out the change and asked, "Why can't we put *MEN* and *WOMEN* on the doors like they do at the gas station?"

Educators of that earlier era may not have thought it appropriate for children even to be passively exposed to words in their environment, but children thought it appropriate. As all the recent research on emerging literacy has shown us, it is through stress-free but regular informal exposure to print that each child becomes ready to read.

Why are we educators so extreme? Why is it forbidden to allow children to see written words in one era, and required in the next to drill them relentlessly in reading skills?

Early childhood professionals know instinctively, as well as through their training, that it is primarily not *what* you teach, but *how* you teach that makes for success or failure. More than 50 years of solid child development research tells us strongly that children under a mental age of 6 years—which many 7-year-olds still are too—are usually still in the learn-by-doing stage. They learn to distinguish letters and numerals by handling plastic or wooden models, by trying to make these symbols out of clay, and by twisting their bodies into these shapes. The young child is the center of his own universe. He must "get inside" the content before he knows it. When the young child tries to write a word or sentence, she must first say each speech sound in sequence as she forms the letters. Early composition is a noisy process. We must question whether or not a kindergarten or first grade (or even a second grade) without a great many lively play activities and interesting projects, and a great deal of quiet conversation among children, is functioning appropriately.

What is wrong? How did our K–1–2 get so calendar age-oriented? Are there alternatives?

In recent years more and more articles have appeared concerning the problems of teaching the youngest children in today's kindergartens. Many teachers recommend raising the entrance age for beginners so they can better master the prescribed curriculum. Would raising entrance age make a difference? Minimum entrance age in the United States varies from 4 years old in New Jersey to 5 by September 1 in 10 states. Other states are in between. The problem is obviously not with entrance age, but that some children in a class are older than others. Some children are chronologically older. Is it not natural that sometimes the younger children will have difficulty keeping up with the older ones? Would we expect the same performance of 1-year-olds as of 2s, of 2-year-olds as of 3s, of 4-year-olds as of 5s? Why then do we expect the same performance of 5s in kindergarten (those just turning 5 during the summer) as of 6s (those who have been 5 since shortly after September 1 a year ago)? Other children are not chronologically older, but are older developmentally speaking, or seem younger than others of the same birth date age.

Around the beginning of this century our nation was receiving numbers of immigrants from all over the world. School administrators in the big cities had to assign the hordes of new children to suitable learning groups. Little was known about the children's backgrounds, native languages, or former education. The solution? Aha! We would divide them into classes by their birth certificates! The graded school model was born. It is still the major model for

In the good old days, kindergarten may have been "too easy," but why make it so difficult that many children "fail"?

grouping schoolchildren in the United States. We are still acting as if all we know about children is what is on their birth certificates. Age on September 1 is usually the determinant for entrance to school. That date was selected because it was near the end of the summer harvest season. We are still acting as if we were primarily an agricultural nation. The age-graded pattern is so common that any variation from it is called *alternative*.

Segregating children by sex, race, ethnic, or socioeconomic differences is against the law. Is it right to segregate by age?

The common national practice here today segregates school entrants into 12-month blocks. Regardless of the established age at entrance, the current system covers children whose accumulated life experiences vary from 1 to 12 months. The general public and the educational establishment assume that all these children have equal opportunity to learn the same prescribed curriculum. If some children do not progress satisfactorily, it is assumed that the children have failed, rather than that the system has failed to meet their needs. No matter how this is presented to the child or the family, the child is separated from the other children who move on. The child feels different from her classmates. At age 5 or 6 it does not help the self-concept. To avoid this trauma, kindergarten teachers are humanely suggesting that we raise entrance age. Is this not manipulating children to solve an administrative problem?

The Supreme Court has emphatically stated that it is unconstitutional to segregate children by sex, race, ethnic, or socioeconomic differences. Young children have no control over these, or over their own month of conception or birth. If their accumulated months of life have an effect on their future success in school, then should it not also be unconstitutional to continue a system in our schools whereby month of birth gives some children a distinct advantage and some a definite disadvantage? It is a break in our national code of civil rights.

Two alternatives

Is there an alternative method of grouping the youngest children in school—those younger than 8? Are 12-month blocks for beginners necessary? Have other groupings been tried?

During World War II, many young British children were sent away from their parents to live in areas less likely to be bombed. After the war, when children returned home, to help heal the children's emotional scars, ***British educators created primary schools with new social patterns; they called classes* family groupings.** The term means that, as in a family, children are of different ages and therefore there are different expectations for each child. Children in these schools were divided, not into 12-month blocks, but into more natural 3-year groups (ages 4–5–6, 5–6–7, 6–7–8). Students stayed with the same familiar teacher for several years. When some of the older children showed that they were ready to move on, some new younger children moved into the group. The formerly younger children then automatically became senior in the group. Sometimes siblings were in the same group, giving security to both children. Older children helped teach younger ones. These British primary schools were not unlike our own American one-room schools.

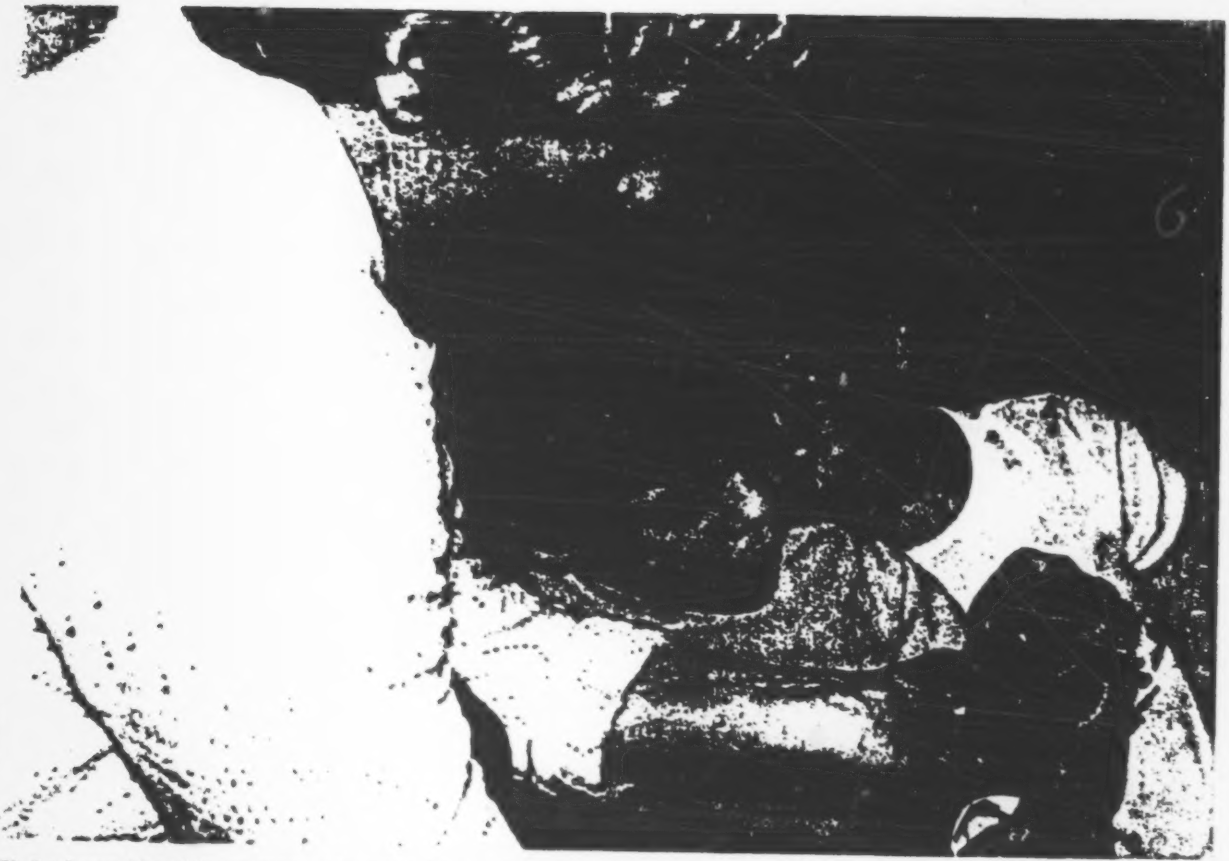
Here is another alternative: ***New Zealand permits children to enter school any time during the school year on their fifth birthday.*** At first these children are called *early entrants*. They move through several cycles or steps during that first year at their own pace. Forward movement is only by achievement, not by birthday, or because the whole class is "being promoted" in a block consisting of children with birthdays dotted throughout a span of 12 months. There is no "skipping"—and there is no "failure." (I have visited New Zealand schools myself, and have talked with educators. They cannot imagine our system. To them, it seems so unfair to young children.) The major advantage of their system, New Zealanders feel, is that no one expects the newcomer to function academically at the same level as the children who entered months before—as the children who are months older. Differences are expected and celebrated as each child joins the school community on her birthday.

My personal experiences teaching ungraded K–1–2

To help solve the current controversies relating to kindergarten age at entrance and the curriculum imposed on kindergartners and first and second graders by outside forces, we might reflect on our own nation's one- and two-room schools, most of which have disappeared. What can we learn from them?

Background

Following our own trauma of World War II, my husband and I



Noreen Thomas

We had considerable parent involvement. Many of the parents were comfortable in a teaching role. They read stories to children, listened to beginners read, brought in farm animals to share, and supervised learning games. Visitors sometimes commented, "This school looks like a parent cooperative preschool!"

searched for a low-stress environment in which to raise our family. We moved to a ranch in Napa Valley, California. Three of our four children were of preschool age. In order to broaden their social experiences we joined with our neighbors in establishing a play group. In several years this grew to be a full-blown parent cooperative preschool. With this teaching experience I was later drafted into teaching in a rural one-room school for 18 children.

On the first morning I rang the antique hand-held brass bell to signal the beginning of class. As the students filed in from the playground an additional 10 children of various ages joined us from the nearby vineyards. They were children of the migrant workers. None of them spoke English. Instantly, I became not only a teacher of a multigrade group, but a bilingual teacher as well.

Until harvest season was over 6 weeks later, we communicated with our Spanish-speaking students primarily by physical demonstrations. Instead of telling them what to do, the other students and I *showed* them, an approach taught to educators years ago by Dr. Maria Montessori. My preschool background in learn-by-doing activities helped. We had no prescribed curriculum for teaching a bilingual class, and no materials. We improvised. My junior high Spanish gradually returned. When the migrant children moved on all of us were minimally bilingual.

My bilingual teaching experience led to directing our county's first Head Start program. While recruiting children we discovered three distinct minority groups in our valley. One minority was the children of single mothers who were supported by Aid to Families with Dependent Children (AFDC) funds. Another minority was the children of the vineyard workers, whose home language was Spanish. Then we discovered a third minority. They were English-speaking children who lived on isolated ranches. At the end of the summer we administered a simple test to find out if we had been able to make a difference in these three groups of children. The group that had made the least progress was the isolated group. The children's problem was undeveloped language. Language and thinking skills go hand in hand. Because they had no neighborhood playmates, these children's language was significantly below age expectation.

Our two-room primary school

Following my Head Start work with the school district, I was assigned to a two-room primary school. Soda Canyon School was located at the entrance to a pocket canyon 10 miles long. Families who lived at the farthest corners of the canyon rarely came over the narrow mountain road to town. These children exhibited the same undeveloped language as the Head Start children. On the other hand, schoolchildren whose families lived at the mouth of the canyon had developed mature language through frequent neighborhood play experiences. This language spread caused wide differences in achievement.

I was assigned to teach the younger children, kindergarten and first-grade age. My teammate for the second- and third-grade students was fresh from college and open to innovation. We began to share classes. She came into my room to teach math while I took her older group for writing activities. We discovered that some of the older students, particularly those from isolated families, were at the same academic levels as the younger group.

We were teaching the same content twice—inefficient. We regrouped the students by achievement levels. Following the British primary model, no group had an age spread of more than 3 years. By adapting to the children's needs, we gradually evolved into a departmentalized, ungraded primary school.

The neighbors at the far end of the canyon reported that there was an 8-year-old boy who had never been to school. The county attendance officer was driven away by shots from the boy's father's shotgun. The school nurse then put on her white coat and bravely approached the ranch. She convinced the family that the boy should come to school. The following week when his 18-year-old sister brought him she told us that she had not been to school for 10 years. Through a work-study program, we were able to hire her as our aide. She proved to be a valuable playground director, nature study expert, and art teacher. She learned basic academic skills with our primary students.

To answer parents' questions about our alternative program, we asked them to an evening meeting. The standing room only crowd was bigger than that for the annual Christmas program. To get support from parents, alternative educational programs must be fully explained to them. We invited parents to visit whenever they came by the school on the way to town. And they did! Many of these adults had previously led groups of children in 4-H activities. They were comfortable in a teaching role. They read stories to children, listened to beginners read, brought in farm animals to share, and supervised learning games. Visitors sometimes commented, "This school looks like a parent cooperative preschool!" Our considerable parent involvement was a direct outgrowth of my own experience both in a parent cooperative preschool and in Head Start. We had parent involvement in full measure. To achieve that, teachers must really want parents and really help them participate significantly in the program.

One year the state widened the highway adjoining the school. Instead of letting the noisy earth-moving equipment disturb our teaching, we sat on the bank and watched. We had a first-hand social studies and science program. The children then brought their own realistic Tonka® earth-moving toys to school. The local Caterpillar tractor agency provided us with other model equipment. The children set up their own earth-moving project in our sandbox. Together, for 3 months, the children and I translated everything the children played into drawings, charts, chalkboard readings, and homemade books. Reading skills can be taught using anything in writing.

My role as the major language arts teacher was to find a successful way to teach reading and writing to the children whose oral language was below age expectation. All the phonics programs available used the concept of beginning sounds of key words (*b* is for ball). Many of the rural children could extract ending sounds of words, but not beginnings. I then invented a phonics program using sounds made by animals familiar to the rural children, rather than the names of the animals—The mosquito hums /mmm/; The hound dog pants /hhhh/. This program gives children the skills for writing creative compositions with inventive spelling before they read books. All the student activities are traditional early childhood activities: listening

"Instantly, I became not only a teacher of a multigrade group, but a bilingual teacher as well."

Peggy O'Neill-Banning

Instead of letting noisy construction interrupt our teaching, we sat on the bank and had a first-hand social studies and science program. The children brought their own earth-moving toys to school and set up a project in our sandbox. Later, we translated everything the children played into drawings, charts, chalkboard readings, and homemade books.

to stories, acting out the stories through dramatic play, drawing the animal characters, and moving like the animals.

A group of mothers made a set of 26 beanbags in the shape of the letter-animals. The beginners learned to blend the animal sounds together into words through beanbag tossing games. It worked! (When Right to Read from the U.S. Office Education made a nationwide search for "Effective Reading Programs," our beanbag program was selected as one of the few original approaches for teaching sound-symbol correspondence. Other selections were effective use of commercial programs.)

One day we were playing a pass-it-on whispering game. I noticed the pained expressions on the faces of our rural children whose articulation was so poor. They were giving the game extreme extra effort. I realized that these children could not whisper! Most of their communication was in vowel sounds. With whispering, consonants are emphasized and vowel sounds are suppressed. We added to our curriculum a daily lip-reading game, with exaggerated mouth positions. Articulation dramatically improved. This spilled over into better test scores for these children. Every child played the game. Those with poor articulation were never singled out.

My teammate brought in a plastic bowling set. A parent donated a strip of hall carpeting to reduce the noise. Voilà! An ideal game for introducing the concept of subtraction was born. Practicing combinations up to 10 in a motivating context became a major pastime.

We set aside the last hour for reviewing the events of each school day. The youngest children drew a picture about the day to share at home. They told us about their picture to help develop oral language. Every day the older children developed an experience story to summarize our day. Instead of having the students copy the story, we dictated it to all children who could write. This was word by word, encouraging children to "write with their ears." We told parents that we believed this invented spelling would eventually lead the children to be good spellers. These daily messages demonstrated to parents that some actual learning was going on. Our writing exercise thus became our public relations program. Five years later we did a comparative study to find out if our unusual approach to spelling had worked. In fifth grade, the children taught spelling first by ear while in first grade had significantly higher scores in spelling on the Stanford Achievement Test than the district norm.

Our little school influenced state guidelines

One year an intern student from the University of California was assigned to us. Her supervisor later was secretary to the California task force that developed the state's exemplary early childhood education program.

The state design included these major changes that the secretary had observed at our Soda Canyon School:

- Departmentalized staffing
- Multiage grouping
- Paraprofessional aides
- Parent involvement
- Peer tutoring
- Objectives based on diagnosis of student needs
- Individualized instruction (meaning not one-to-one, but appropriate)
- School climate that enhances self-concept
- Opportunity for a child to complete the 4-year primary curriculum in 3, 4, or 5 years without being considered exceptional

Family grouping permitted newly entering children from our area's Spanish-speaking culture to experience much less separation anxiety because they were with siblings until they were comfortable in the school setting. With no grade levels at Soda Canyon, no child was officially retained or accelerated. No child moved to fourth grade at the larger school until readiness for success was obvious. The extra year to grow was all that was necessary. To me, the best groupings a school can have vary, but are 4–5–6, or 5–6–7, or 6–7–8, or 7–8–9; usually third graders have more in common with fourth than with second graders. When asked what grade they were in, a common answer from the Soda Canyon children was, "I don't know. I go to Primary School."

Is it any harder to teach an ungraded group? Does it work better?

In most American schools today, by third grade most classroom rosters will reveal a spread of 3 years, not 12 months. Along the way some children have been retained, and some accelerated. Both decisions result in trauma for the individuals involved.

Is it harder to teach a 3-year span, such as K–1–2? It is common practice to divide a primary class into three reading or math groups for efficient teaching. One group is usually working above the grade designation and one below—a 3-year span. Grouping in K–1–2 spans is no different, except the differences are considered natural and normal. There is no "dumb" group. (Anyone who thinks children in the lowest reading group don't feel dumb doesn't know young children well.) And, like the one-room school, there is an atmosphere of cooperation, rather than competition.

It took no extra funding to run our Soda Canyon Ungraded Primary School. We simply

1) grouped students in a fashion more consistent with the philosophy of enhancing each child's positive self-image than is the arbitrary 12-month block system typically used, and

2) instead of designing a curriculum and then trying to fit children into it, we designed a developmental curriculum around the specific needs of individual enrolled children. *With these two changes our end-of-year achievement scores went from next to the lowest of 24 elementary schools in the district to the highest.*

Parents from other schools began to enroll their children with us until we were filled to our capacity of 60 students. Parents then camped out all night on the school grounds to be among the first in line on enrollment day. Our success was not appreciated by the other elementary principals who used the traditional age-graded system. Five years after we started this work, when the dis-

Stanford Achievement Test Primary 1 Grade Equivalents*

	1964	1973	1982
Vocabulary (*understanding spoken English*)	1.0	K.4	K.2
Word reading	1.0	K.1	K.1
Word study (*phonics*)	1.1	K.5	K.2
Math concepts (*not calculation*)	1.1	K.2	K.5

Stanford Achievement Test Primary 1 grade equivalents. (From Stanford Achievement Test Series, *Multilevel Norms Booklet and Special Report no. 4, 1983,* and *Primary Level 1 Battery: Norms Booklet Form A, 1973.*)

Content expected in the 1964 edition of the Stanford Achievement Test at first-grade level dropped into kindergarten in the 1973 edition of the same test, then even lower in the 1982 edition. Math concepts moved back upward 3 months in the 1982 edition. This was probably a result of public dissatisfaction with New Math and consequent emphasis on calculation rather than concepts.

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* Connell, D. R. (1985). *Writing is child's play.* Circle Pines, MN: American Guidance Service.

Joann Bush Michael Schulman Jim Fre

We set aside the last hour of every school day to review the day's events. The youngest children drew a picture about the day to share at home. The older children developed an experience story to summarize the day. Instead of the children then copying the story, they were encouraged to listen to a dictation of the story and "write with their ears."

trict's enrollment dropped, the principals convinced the school board that larger schools are more economical. This may be true in a certain sense, but not when the immense cost of remediation and retention are considered—not to mention the cost to society of causing children to become so discouraged that they drop out and become the unemployed, underemployed, or those with very expensive problems such as drug problems. Political pressure then forced the board to close our model school.

Should we organize and advocate for better ways to begin children's school years?

As an individual child advocate, I failed to make a permanent change in my school district. Group action by parents, backed by early childhood professionals, however, might be sufficient political clout to encourage school boards to experiment with better ways to group children in their first years of school.

"The co-teacher and I began solving our teaching problems. One thing led to another. After a while, we realized that we had team teaching, departmentalization, a community resident paraprofessional aide, and an abundance of parent volunteers."

Nursery school or not? Five years old by June? September? Or sooner? Gesell tests or developmental screening? Half- or full-day kindergarten? Formal reading readiness, or the gradual emergence of literacy through exposure to loved ones, reading and writing at home and elsewhere, being read to frequently, and seeing admired people reading and writing throughout their lives? These are all important questions, but we have another centrally important issue to focus on, too.

We are *causing* young children to experience all the lowered self-esteem, loss of friends, parental concern, and damaged motivation that comes from school failure. Perhaps the solution to the problem will come, not by manipulating children with regard to birth dates and extra classes, but by changing the unfortunate lock-step system that we designed long, long ago.

Any skill in any subject can be taught through a child-suitable activity. Workbooks are nonessentials.

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This article is excerpted from NAEYC's new expanded edition of Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth Through Age 8, edited by Sue Bredekamp.

PART 7

NAEYC Position Statement on Developmentally Appropriate Practice in the Primary Grades

Serving 5- Through 8-Year-Olds

The current trend toward critical examination of our nation's educational system has recently included concerns about the quality of education provided in elementary schools (Bennett, 1986; Office of Educational Research and Improvement, 1986). Concerns have been raised because, in response to calls for "back to basics" and improved standardized test scores, many elementary schools have narrowed the curriculum and adopted instructional approaches that are incompatible with current knowledge about how young children learn and develop. Specifically, rote learning of academic skills is often emphasized rather than active, experiential learning in a meaningful context. As a result, many children are being taught academic skills but are not learning to apply those skills in context and are not developing more complex thinking skills like conceptualizing and problem solving (Bennett, 1986).

The National Asociation for the Education of Young Children (NAEYC), the nation's largest organization of early childhood educators, defines early childhood as the years from birth through age 8. NAEYC believes that on index of the quality of primary education is the extent to which the curruculum and instructional methods are developmentally appropriate for children 5 through 8 years of age. The purpose of this position statement is to describe both developmentally appropriate and inappropriate practices in the primary grades. This position statement relfects the most current knowledge of teaching and learning as derived from theory, research, and practice. This statement is intended for use by teachers, parents, school administrators, policymakers, and others who make decisions about primary grade educational programs. (NAEYC's Position Statement on Developmentally Appropriate Practice in Programs for 4- and 5-Year-Olds specifically defines appropriate practices for prekindergarten and kindergarten programs; see pp. 51–59.)

Background information

Classrooms serving primary-age children are typically part of larger institutions and complex educational systems with many levels of administration and supervision. Classroom teachers may have little control over the curriculum or policies they implement. However, ensuring developmentally appropriate practice in primary education requires the efforts of the entire group of educators who are responsible for planning and implementing curriculum—teachers, curriculum supervisors, principals, and superintendents. At the same time, ensuring developmentally appropriate practice is the professional obligation of each individual educator. No professional should abdicate this responsibility in the absence of mutual understanding and support of colleagues or supervisors. This position statement is intended to support the current appropriate practices of many primary-grade programs and to help guide the decisions of administrators so that developmentally appropriate practices for primary-age children become more widely accepted, supported, and followed.

Curriculum derives from several sources: the child, the content, and the society. The curriculum in early childhood programs is typically a balance of child-centered and content-centered curriculum. For example, good preschools present rich content in a curriculum that is almost entirely child-centered. As children progress into the primary grades, the emphasis on content gradually expands as determined by the school, the local community, and the society. The challenge for curriculum planners and teachers is to ensure that the content of the curriculum is taught so as to take optimum advantage of the child's natural abilities, interests, and enthusiasm for learning.

Development and learning in primary-age children

Integrated development and learning

In order to provide developmentally appropriate primary education, it is essential to understand the development that typically occurs during this period of life and to understand how 5- through 8-year-old children learn. We can then derive principles of appropriate practice for primary-age children. One of the most important premises of human development is that all domains of development—physical, social, emotional, and cognitive—are integrated. Development in one dimension influences and is influenced by development in other dimensions. This premise is violated when schools place a great emphasis on the cognitive domain while minimizing other aspects of children's development. Because development cannot be neatly separated into parts, failure to attend to all aspects of an individual child's development is often the root cause of a child's failure in school. For example, when a child lacks social skills and is neglected or rejected by peers, her or his ability to work cooperatively in a school setting is impaired. As interest lags, the child's learning may also be impaired, and she or he may become truant or eventually drop out (Burton, 1987). *The relevant principle of instruction is that teachers of young children must always be cognizant of "the whole child."*

Children's learning, like development, is integrated during the early years. One of the major pressures on elementary teachers has always been the need to "cover the curriculum." Frequently, they have tried to do so by tightly scheduling discrete time segments for each subject. This approach ignores the fact that young children do not need to distinguish learning by subject area. For example, they extend their knowledge of reading and writing when they work on social studies projects; they learn mathematical concepts through music and physical education (Van Deusen-Henkel & Argondizza, 1987). *The relevant principle of instruction is that throughout the primary grades the curriculum should be integrated* (Katz & Chard, in press).

Integration of curriculum is accomplished in several ways. The curriculum may be planned around themes that are selected by the children or by the teacher based on the children's interests. For example, children may be interested in the ocean because they live near it. Children may work on projects related to the ocean during which they do reading, writing, math, science, social studies, art, and music. Such projects involve sustained, cooperative effort and involvement over several days and perhaps weeks.

Integrated curriculum may also be facilitated by providing learning areas in which children plan and select their activities. For example, the classroom may include "a fully-equipped publishing center, complete with materials for writing, illustrating, typing, and binding student-made books; a science area with animals and plants for observation, and books to study; and other similar areas" (Van Deusen-Henkel & Argondizza, 1987). In such a classroom, children learn reading as they discover information about science; they learn writing as they work together on interesting projects. Such classrooms also provide opportunities for spontaneous play, recognizing that primary-age children continue to learn in all areas through unstructured play—either alone or with other children.

Physical development

During the primary years, children's physical growth tends to slow down as compared to the extremely rapid physical growth that occurred during the first 5 years of life. Children gain greater control over their bodies and are able to sit and attend for longer periods of time. However, primary-age children are far from mature physically and need to be active. Primary-grade children are more fatigued by long periods of sitting than by running, jumping, or bicycling. Physical action is essential for these children to refine their developing skills, like batting a ball, skipping rope, or balancing on a beam. Expressing their newly acquired physical power and control also enhances their self-esteem.

Physical activity is vital for children's cognitive growth as well. When presented with an abstract concept, children need physical actions to help them grasp the concept in much the same way that adults need vivid examples and illustrations to grasp unfamiliar concepts. But unlike adults, primary-age children are almost totally dependent on first-hand experiences. *Therefore, an important principle of practice for primary-age children is that they should be engaged in active, rather than passive, activities* (Katz & Chard, in press). For example, children should manipulate real objects and learn through hands-on, direct experiences rather than be expected to sit and listen for extended periods of time.

Cognitive development

The learning patterns of primary-age children are greatly affected by the gradual shift from preoperational to concrete operational thought, a major dimension of cognitive development during these years (Piaget, 1952; Piaget & Inhelder, 1969). Between 6 and 9 years of age, children begin to acquire the mental ability to think about and solve problems in their heads because they can then manipulate objects symbolically—no longer always having to touch or move them. This is a major cognitive achievement for children that extends their ability to solve problems. Despite this change in approach to cognitive tasks, however, primary-age children are still not capable of thinking and problem solving in the same way as adults. While they can symbolically or mentally manipulate objects, it will be some time before they can mentally manipu-

Elaine M. Ward

Provide opportunities for 5- to 8-year-olds to do real things and to write, read, and play in relation to the learning activity.

late symbols to, for example, solve mathematical problems such as missing addends or to grasp algebra. For this reason, primary-age children still need real things to think about. Accordingly, while children can use symbols such as words and numbers to represent objects and relations, they still need concrete reference points. *Therefore, a principle of practice for primary-age children is that the curriculum provide many developmentally appropriate materials for children to explore and think about and opportunities for interaction and communication with other children and adults. Similarly, the content of the curriculum must be relevant, engaging, and meaningful to the children themselves* (Katz & Chard, in press).

Young children construct their own knowledge from experience. In schools employing appropriate practices, young children are provided with many challenging opportunities to use and develop the thinking skills they bring with them and to identify and solve problems that interest them. In addition, appropriate schools recognize that some thinking skills, such as understanding mathematical place value and "borrowing" in subtraction, are beyond the cognitive capacity of children who are developing concrete operational thinking and so do *not* introduce these skills to most children until they are 8 or 9 years of age (Kamii, 1985).

Children in the stage of concrete operations typically attain other skills that have important implications for schooling (Elkind, 1981). Among these is the ability to take another person's point of view, which vastly expands the child's communication skills. Primary-age children can engage in interactive conversations with adults as well as with other children and can use the power of verbal communication, including joking and teasing. Research demonstrates that engaging in conversation strengthens children's abilities to communicate, express themselves, and reason (Nelson, 1985; Wells, 1983; Wilkinson, 1984). Research also indicates that adults can help prolong and expand children's conversations by making appropriate comments (Blank, 1985). *Therefore, relevant principles of practice are that primary-age children be provided opportunities to work in small groups on projects that "provide rich content for conversation" and that teachers facilitate discussion among children by making comments and soliciting children's opinions and ideas* (Katz & Chard, in press).

Social-emotional and moral development

Children of primary-grade age are becoming intensely interested in peers. Establishing productive, positive social and working relationships with other children close to their age provides the foundation for developing a sense of social competence. Recent research provides powerful evidence that children who fail to develop minimal social competence and are rejected or neglected by their peers are at significant risk to drop out of school, to become delinquent, and to experience mental health problems in adulthood (Asher, Hymel, & Renshaw, 1984; Asher, Renshaw, & Hymel, 1982; Cowen, Pederson, Babigian, Izzo, & Trost, 1973; Gronlund & Holmlund, 1985; Parker & Asher, 1986). Research also demonstrates that adult intervention and coaching can help children develop better peer relationships (Asher & Williams, 1987; Burton, 1987). *The relevant principle of practice is that teachers recognize the importance of developing positive peer group relationships and provide opportunities and support for cooperative small group projects that not only develop cognitive ability but promote peer interaction.*

The ability to work and relate effectively with peers is only one dimension of the major social-emotional developmental task of the early school years—the development of a sense of competence. Erikson (1963) describes this major developmental challenge as the child's struggle between developing a sense of industry or feelings of inferiority. *To develop this sense of industry or a sense of competence, primary-age children need to acquire the knowledge and skills recognized by our culture as important, foremost among which are the abilities to read and write and to calculate numerically.* If children do not succeed in acquiring the competence needed to function in the world, they develop a sense of inferiority or inadequacy that may seriously inhibit future performance. The urge to master the skills of esteemed adults and older children is as powerful as the urge to stand and walk is for 1-year-olds. Yet when expectations exceed children's capabilities and children are pressured to acquire skills too far beyond their ability, their motivation to learn as well as their self-esteem may be impaired. A major cause of negative self-image for children this age is failure to succeed in school, for instance failing to learn to read "on schedule" or being assigned to the lowest ability math group.

At about age 6, most children begin to internalize moral rules of behavior and thus acquire a conscience. Children's behavior often shows that they find it difficult to live with and by their new self-monitoring and that they need adults' assistance. *Teachers and parents need to help children accept their conscience and achieve self-control.* In appropriate classrooms, teachers use positive guidance techniques, such as modeling and logical consequences, to help children learn appropriate behavior, rather than punishing, criticizing, or comparing children. In addition, teachers involve children in establishing and enforcing the few, basic rules necessary for congenial group living. Sensitive teachers ask children what they think of their work or behavior. The teacher points out how pleased the child must feel when a goal is accomplished. If achievement is lacking, the teacher empathizes with a child's feelings and solicits her or his ideas as to how to improve the situation.

Children at this age also begin to make more accurate judgments about what is true and false and to rigidly apply their newfound understanding of rules (Elkind, 1981). Their newly formed consciences are often excessively strict. For example, they may treat every little mistake as a major crime, deserving of terrible punishment. Adults help children assess mistakes realistically and find ways of correcting them. Children's developing consciences especially insist on fairness and adherence to rules. They closely observe adult infractions so it is very helpful for adults to be fair and obey rules. Sensitive teachers appeal to children's respect for fairness and rules when it comes to their interactions with others or when it is necessary to deny their requests, for example, "If I allow you to do that, I would be unfair to the others and you couldn't trust that, some other time, I wouldn't also be unfair to you" (Furman, 1980, 1987a, 1987b).

Despite their increased independence and developing consciences, 5-, 6-, 7-, and even 8-year-old children still need supervision and the support of trusted adults. As a result, children in this age group should not be expected to supervise themselves in school or after school for extended periods of time. Teachers and parents provide opportunities for children to develop independence and assume responsibility but should not expect primary-age children to display adult levels of self-control.

Individual differences and appropriate practices

Knowledge of age-appropriate expectations is one dimension of developmentally appropriate practice, but equally important is knowledge of what is individually appropriate for the specific children in a classroom. Although universal and predictable sequences of human development appear to exist, a major premise of developmentally appropriate practice is that each child is unique and has an individual pattern and timing of growth, as well as individual personality, learning style, and family background. Children's sense of self-worth derives in large part from their experiences within the family. When children enter school, their self-esteem comes to include the school's opinion of their family. When children sense that teachers respect and value their families, and respect the particular cultural patterns by which their family lives, their own sense of self-esteem and competence is enhanced. It is developmentally appropriate to view parents as integral partners in the educational process. Teachers should communicate frequently and respectfully with parents and welcome them into the classroom. Teachers need to recognize that cultural variety is the American norm and that children's abilities are most easily demonstrated through familiar cultural forms (Hilliard, 1986).

Enormous variance exists in the timing of individual development that is within the normal range. Developmentally appropriate schools are flexible in their expectations about when and how children will acquire certain competencies. Recognition of individual differences dictates that a variety of teaching methods be used (Durkin, 1980; Katz & Chard, in press). Because children's backgrounds, experiences, socialization, and learning styles are so different, any one method is likely to succeed with some children and fail with others. *The principle of practice is that the younger the children and the more diverse their backgrounds, the* *wider the variety of teaching methods and materials required* (Durkin, 1980; Katz & Chard, in press; Katz, Raths, & Torres, undated).

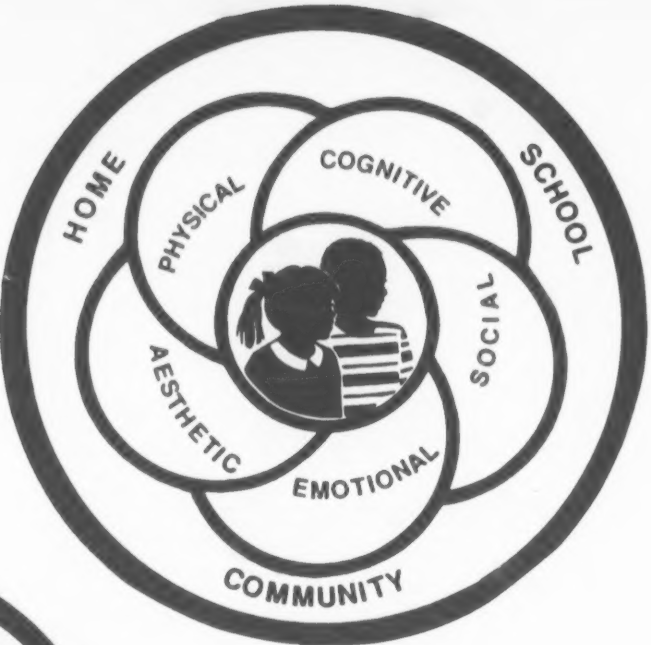
Developmentally appropriate schools are also flexible in how they group children. Rigid adherence to chronological age/grade groupings or ability groupings is inappropriate. For this reason, some schools provide ungraded primary or several alternatives such as 2- or 3-year combination classrooms of 5-, 6-, and 7-year-olds or 6-, 7-, and 8-year-olds. Some schools recognize that many 8-year-olds are developmentally more like 9- and 10-year-olds and others more like 6- or 7-year-olds. Such combination classrooms or ungraded primary schools provide a vehicle for preserving heterogeneous groups while also providing more time for children to develop at their own pace and acquire early literacy and mathematical skills.

Most children have individual, personal interests and needs just as adults do. Most children are motivated to learn by an intense desire to make sense out of their world and to achieve the competencies desired by the culture. Children are learning all the time although they may not be learning the prescribed curriculum presented by the teacher (Elkind, 1981). For example, some children learn quickly that they are not smart (in the eyes of their teacher) or that their ideas are unimportant; other children learn that they are not effective group members. The learning that takes place in the primary grades far exceeds the knowledge and skills designated in the written curriculum. Research (Covington, 1984; Stipek, 1984) shows that unless they have a physical disability or illness or have been abused, preschool and kindergarten children are optimistic about their own powers and arrive at school confident that they will achieve. They are developing and acquiring skills so rapidly that they naturally assume that what they cannot do today will be possible tomorrow (Hills, 1986). As children get older, they begin to understand the limits of their own abilities and they also become more aware of social comparison. In the normal course of development, children compare themselves to others favorably and unfavorably. This information becomes part of their self-concept and can affect their motivation for activity. For example, children learn whether they are better at science or art or baseball and such learning influences life decisions. *Unfortunately, when schools unduly rely on competition and comparison among children, they hasten the process of children's own social comparison, lessen children's optimism about their own abilities and school in general, and stifle motivation to learn* (Hills, 1986).

During the early years, children are not only learning knowledge and skills, they are acquiring dispositions toward learning and school that could last a lifetime (Elkind, 1987; Gottfried, 1983; Katz, 1985; Katz & Chard, in press). Dispositions are "relatively enduring habits of mind and action, or tendencies to respond to events or situations," for example, curiosity, humor, or helpfulness (Katz & Chard, in press). *Longitudinal research indicates that curriculum and teaching methods should be designed so that children not only acquire knowledge and skills, but they also acquire the disposition or inclination to use them.* Compelling evidence exists asserting that overemphasis on mastery of narrowly defined reading and arithmetic skills and excessive drill and practice of skills that have been mastered threaten children's dispositions to use the skills they have acquired (Dweck, 1986; Katz & Chard, in press; Schweinhart, Weikart, & Larner, 1986; Walberg, 1984). It is as important for children to acquire the desire to read during the primary grades as it is for them to acquire the mechanics of reading. Similarly, it is as important for children to want to apply math to solve problems as it is for them to know their math facts.

The primary grades hold the potential for starting children on a course of lifelong learning. Whether schools achieve this potential for children is largely dependent on the degree to which teachers adopt principles of developmentally appropriate practice. The principles of practice described here have historical roots that include Dewey's progressive education (Biber, Murphy, Woodcock, & Black, 1942; Dewey, 1899), and the open education movement of the 1960s (Barth, 1972; Weber, 1971). Although the principles are similar in many instances to principles espoused by both those movements, this position statement does not advocate a return to practices of the past but rather builds on previous experience and reflects the knowledge acquired in the interim. Theory and research regarding effective curriculum and instruction have increased enormously in recent years and have contributed to our greater understanding of the teaching/learning process. This position statement reflects the most current knowledge of teaching and learning as derived from theory, research, and practice.

The components of a primary grade educational program are described here both in terms of what is appropriate, or ideals to strive for, and what is inappropriate because people develop concepts from exposure to both positive and negative examples. While it is true that most elementary schools and classrooms exhibit some characteristics described here as inappropriate, many schools and classrooms incorporate elements of appropriate practice while many others are models of what is deemed professionally appropriate. (Integrated program components overlap considerably and are identified here separately for purposes of clarity only.)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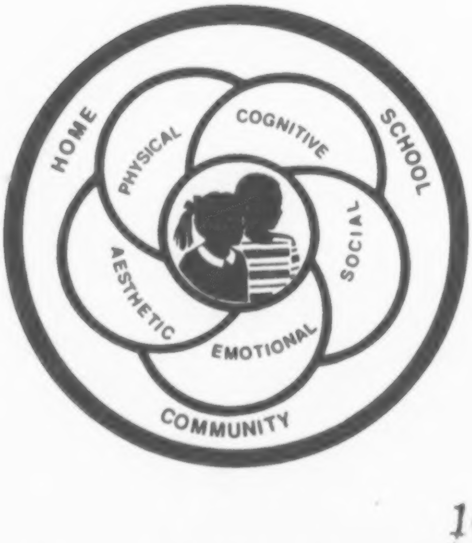
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